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WEATHER BUREAU

CHARLES F. MARVIN, Chief

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MONTHLY WEATHER REVIEW

SUPPLEMENT NO. 5

AEROLOGY No. 2

FREE-AIR DATA AT DREXEL AEROLOGICAL STATION:  
JANUARY, FEBRUARY, AND MARCH, 1916

BY

THE AEROLOGICAL DIVISION, WILLIAM R. BLAIR, In Charge



WASHINGTON  
GOVERNMENT PRINTING OFFICE

1917

#### ANNOUNCEMENT.

During the summer of 1913 the issue of the system of publications of the Department of Agriculture was changed and simplified so as to eliminate numerous independent series of Bureau bulletins. In accordance with this plan, among other changes, the series of quarto bulletins—lettered from A to Z—and the octavo bulletins—numbered from 1 to 44—formerly issued by the U. S. Weather Bureau have come to their close.

Contributions to meteorology such as would have formed bulletins are authorized to appear hereafter as Supplements to the MONTHLY WEATHER REVIEW. (Memorandum from the Office of the Assistant Secretary, May 18, 1914.)

These supplements will comprise those more voluminous studies which appear to form permanent contributions to the science of meteorology and of weather forecasting, as well as important communications relating to the other activities of the U. S. Weather Bureau. They will appear at irregular intervals as occasion may demand, and will contain approximately 100 pages of text, charts, and other illustrations. Copies may be procured at the prices indicated below by addressing the Superintendent of Documents, Government Printing Office, Washington, D. C.

#### SUPPLEMENTS PUBLISHED.

No. 1. Types of storms of the United States and their average movements. By E. H. Bowie and R. H. Weightman. Washington, 1914. 37 p. 114 ch. 4°. Price 25 cents.

No. 2. I. Calendar of the leafing, etc., of the common trees of the Eastern United States. By G. N. Lamb. 19 p. 4 figs. II. Phenological dates, etc., recorded by T. Mikesell at Wauseon, Ohio. By J. Warren Smith. 73 p. 2 figs. Washington, 1915. 4°. Price 25 cents.

No. 3. (Aerology No. 1.) Sounding balloon ascensions at Fort Omaha, Nebr., May 8, 1915, etc. By W. R. Blair and others. Washington, 1916. 67 p. 23 figs. 4°. Price 25 cents.

No. 4. Types of anticyclones of the United States and their average movements. By E. H. Bowie and R. H. Weightman. Washington, 1917. 25 p. 7 figs. 73 ch. 4°. Price, 25 cents.

No. 5. (Aerology No. 2.) Free-air data at Drexel Aerological Station, January, February, and March, 1916. By W. R. Blair and others. Washington, 1917. 59 p. 6 figs. 4°. Price, 25 cents.



U. S. DEPARTMENT OF AGRICULTURE  
WEATHER BUREAU

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U. S. DEPARTMENT OF AGRICULTURE

OFFICE OF THE SECRETARY

WASHINGTON, D. C.

1917

# MONTHLY WEATHER REVIEW

STATE OF NEW YORK

For the month of January, 1917.

By J. J. HENNING, Chief Clerk.

Published by the State of New York.



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1917



# FREE-AIR DATA AT DREXEL AEROLOGICAL STATION: JANUARY, FEBRUARY, AND MARCH, 1916.

By the AEROLOGICAL DIVISION, WILLIAM R. BLAIR in charge.

In the 91 days of this period 138 free-air observations by means of kites were made. Of these observations 49 were made in January, 39 in February, and 50 in March. The means of the highest points reached with the kites are 2,722 meters above sealevel in January, 2,869 in February, 2,631 in March, and 2,731 for the period.

The observation of January 26, 1916, illustrates a type wind condition not found at Mount Weather, Va. On this date there were heavy low clouds and a northwest wind. The wind was strong up to the base of the cloud layer, but fell to a very low velocity above this level.

*Halos of January 27, 1916.*—Halos of 22° and 46° radius, also parhelia and a circumzenithal arc about 25° in length, were observed at 9 a. m. on January 27, 1916. The altitude of the sun at this time was 14°. The smaller halo was of about the average brightness; the larger halo was very faint, except at the point of tangency with the circumzenithal arc, where the coloring was most brilliant. At this point the red of the circumzenithal arc coincided with the blue of the halo. The parhelia were remarkably brilliant and were about 24° distant from the sun, just outside but in contact with the smaller halo. These phenomena persisted with little change until about 10 a. m., after which all except the parhelia and portions of the smaller halo near them disappeared. The parhelia were visible until sunset. During the 27th the sky was partly covered with cirro-stratus and cirrus. At about 9 p. m. stratus clouds appeared and the sky was overcast by 11:30 p. m. Snow began at 1:31 a. m. of the 28th and continued for about 24 hours.

*Halo and corona of March 17, 1916.*—On March 17 a lunar halo and a lunar corona were reported as occurring simultaneously with only cirrus and cirro-stratus clouds noted. It is possible that not a corona but a halo of small radius within the 22° halo was observed.

On March 26, with a LOW central over St. Louis and HIGHS over North Dakota and Wyoming, all of moderate intensity, an exceptionally deep northeast wind was observed. This wind persisted to the highest altitude reached, 2,281 meters above sealevel. The wind velocity increased with altitude to 31.6 m. p. s. at the highest point reached. All clouds observed, strato-cumulus, alto-stratus, and cirro-stratus, were also moving from the northeast.

TABLE 1.—Comparison of mean temperatures, °C, for January, February, and March, at Drexel, Nebr., and Mount Weather, Va.

Altitude, sea level.	JANUARY.			FEBRUARY.			MARCH.		
	Drexel, 1916.	Mount Weather, 5-year mean.	Departures.	Drexel, 1916.	Mount Weather, 5-year mean.	Departures.	Drexel, 1916.	Mount Weather, 5-year mean.	Departures.
Meters.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.
398.....	a- 8.3			b- 3.8					
500.....	- 8.7	d- 1.3	-7.4	- 4.1	d- 0.8	-3.3	3.0	44.6	-1.6
750.....	- 8.8	- 1.7	-7.1	- 4.3	- 1.6	-2.7	2.4	3.5	-1.1
1,000....	- 6.7	- 2.0	-4.7	- 3.2	- 2.4	-0.8	2.4	2.5	-0.1
1,250....	- 4.8	- 2.5	-2.3	- 1.8	- 2.9	-1.1	2.4	1.6	-0.8
1,500....	- 4.3	- 2.9	-1.4	- 2.0	- 3.4	-1.4	2.6	0.7	-1.9
1,750....	- 3.8	- 3.4	-0.4	- 1.7	- 4.1	-2.4	2.0	- 0.3	-2.3
2,000....	- 4.1	- 4.0	-0.1	- 1.9	- 4.8	-2.9	1.0	- 1.3	-2.3
2,250....	- 4.8	- 4.7	-0.1	- 2.9	- 5.6	-2.7	- 0.3	- 2.4	-2.1
2,500....	- 5.8	- 5.7	-0.1	- 4.0	- 6.8	-2.8	- 2.0	- 3.6	-1.6
2,750....	- 6.9	- 6.8	-0.1	- 5.2	- 7.8	-2.8	- 3.8	- 4.9	-1.1
3,000....	- 8.1	- 8.2	-0.1	- 6.8	- 9.0	-2.2	- 5.4	- 6.2	-0.8
3,250....	- 9.1	- 9.6	-0.5	- 8.4	-10.5	-2.1	- 7.1	- 7.6	-0.5
3,500....	-10.2	-10.9	-0.7	- 9.9	-12.0	-2.1	- 8.9	- 8.9	0.0
3,750....	-11.2	-12.2	-1.0	-11.2	-13.3	-2.1	-10.7	-10.3	-0.4
4,000....	-12.5	-13.6	-1.1	-12.3	-14.8	-2.5	-11.7	-11.5	-0.1
4,250....	-13.6	-15.0	-1.4	-13.5	-16.3	-2.8	-13.7	-13.5	-0.2
4,500....	-14.9	-16.4	-1.5						

a Actual 24-hour mean temperature, -9.3°.

b Actual 24-hour mean temperature, -5.9°.

c Actual 24-hour mean temperature, 3.2°.

d At surface, 526 meters above sealevel.

A comparison of the mean monthly temperatures for this period with the 5-year means observed at Mount Weather, Va., for the same months is shown in Table 1. In all cases a fairly pronounced negative departure at the earth's surface gradually gives place to positive departures at higher levels. Departures change sign at the 2,750-meters level in January, but at the 1,250-meters level in February and March. There is a gradual increase in the January departures from the surface to the highest levels explored. In February the departure is fairly constant from the 1,750-meters level to the highest levels explored. In March the maximum departure observed occurs at the 1,750- or 2,000-meters level. Complete data for the three months are shown in Tables 2, 3, and 4.

## Pressures and winds during the series flights.

During the period 6 series of observations of diurnal variation were made. There were 9 successive flights on January 17-18; 7 on January 27-28; 8 on February 14-15; 5 on February 21-22; 8 on March 17-18; and 8 on March 28-29. The average heights of the highest points reached in each series were, in chronological order, 2,999

2,607, 3,529, 2,845, 3,118, and 2,516 meters above sea-level. The duration of each series and the temperatures observed are shown in figures 1 to 6. Weather conditions during each series, except the pressure distribution, and all other observed data may be seen in Table 2.

When the series of January 17-18 was begun, a ridge of high pressure, 1,044 millibars, with centers over Montana and Texas, lay to the west of the station. Near the close of the series this ridge had moved eastward past the station. The winds, therefore, were northwest turning to southwest at the surface, but northwest and west-northwest throughout the series aloft.

At the beginning of the series of January 27-28 a pronounced HIGH, 1,050 millibars, was central over northern Montana, a LOW, 1,010 millibars, was central over northern Illinois, and another, 995 millibars, was approaching the central California coast. During the series the HIGH remained nearly stationary, but the Pacific LOW traveled eastward to Utah. Surface winds were northwest shifting to east-northeast; winds aloft were west-southwest shifting to south-southwest.

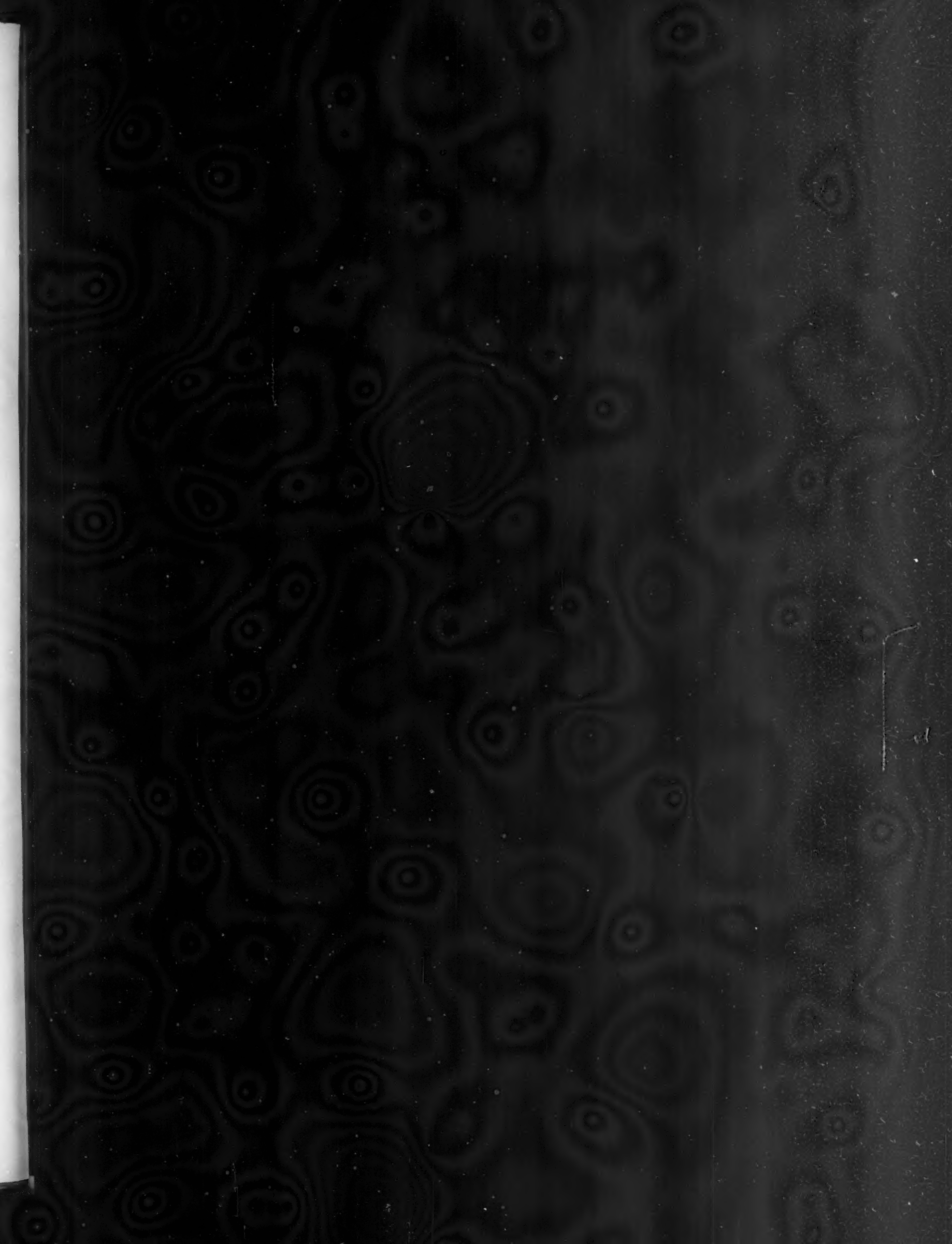
Pressure over the entire country was high during the series of February 14-15. There were two well developed HIGHS, one central over the lower Lakes, 1,041 millibars, the other over Idaho, 1,038 millibars. The first of these diminished in intensity and moved slightly southward during the series; the second remained about stationary. Conditions at the station were under the influence of the eastern HIGH at first, but later under the influence of the western HIGH. Winds at the surface were southwest, then northwest; aloft, they were west shifting to north, then back to northwest.

At the beginning of the series of February 21-22 a HIGH, 1,033 millibars, was central over the lower Lakes and a LOW, 1,007 millibars, over Nevada. There was also a moderate HIGH, 1,021 millibars, over Montana. During the series the eastern HIGH moved southeastward,

the northwestern HIGH remained nearly stationary and the Nevada LOW moved eastward, being central at 8 a. m. of the 22d over Kansas, 1,009 millibars. The surface winds were south and southeast, under the influence of the eastern HIGH, until 3 a. m. of the 22d, after which they were north-northeast to north-northwest, under the influence of the western LOW, which had moved to the east of the station. Aloft the winds were southwest to west-southwest, shifting to west and west-northwest.

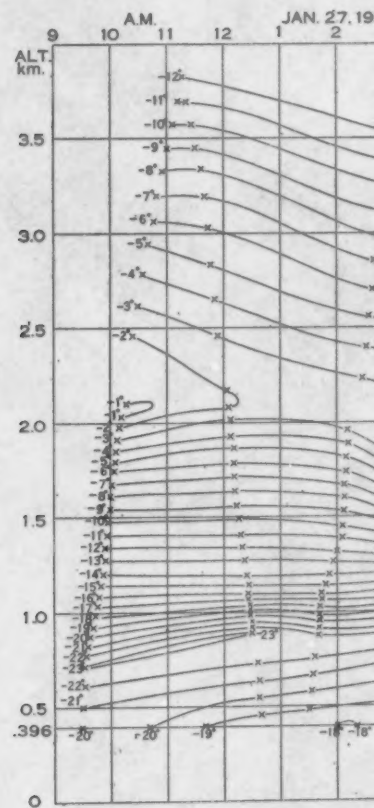
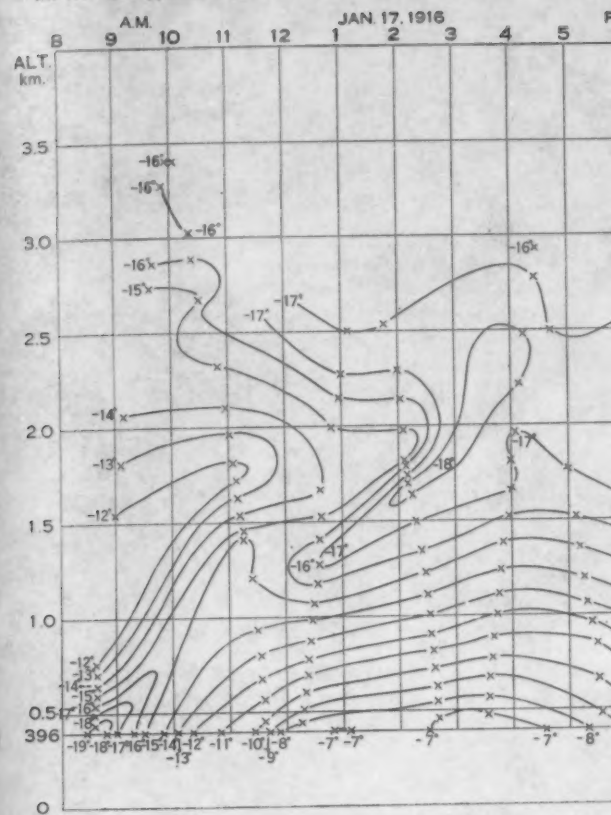
At the beginning of the series of March 17-18 a well-developed HIGH, 1,036 millibars, was central over the upper Lakes, with no pronounced disturbance west of the Mississippi. By the morning of the 18th the Lakes HIGH had moved eastward, and a moderate HIGH, 1,026 millibars, had developed to the northwest of the station, being central over North Dakota. Pressure was relatively low, 1,009 millibars, over Kansas. The winds at the surface were east-southeast and southeast under the influence of the Lakes HIGH until 1:30 a. m. of the 18th, when they became north to north-northeast under the influence of the northwestern HIGH. Aloft the winds were west and west-northwest shifting to northwest and north-northwest.

At the beginning of the series of March 28-29 a LOW, 1,004 millibars, was central over Virginia and another, 1,006 millibars, was central over Wyoming. Relatively high pressure was between, with a center, 1,020 millibars, over Galveston, and one, 1,025 millibars, north of the Great Lakes. During the series the eastern LOW moved eastward off the Atlantic coast, and the western LOW moved eastward to Kansas, increasing in intensity to 1,004 millibars. The high pressure ridge moved slightly eastward. Winds at the surface were controlled by the western LOW and were south-southeast shifting to southeast. Aloft they were south-southeast shifting to south-southwest and back to south.





M. W. R., Supplement No. 5.



[Facing p. 4.]

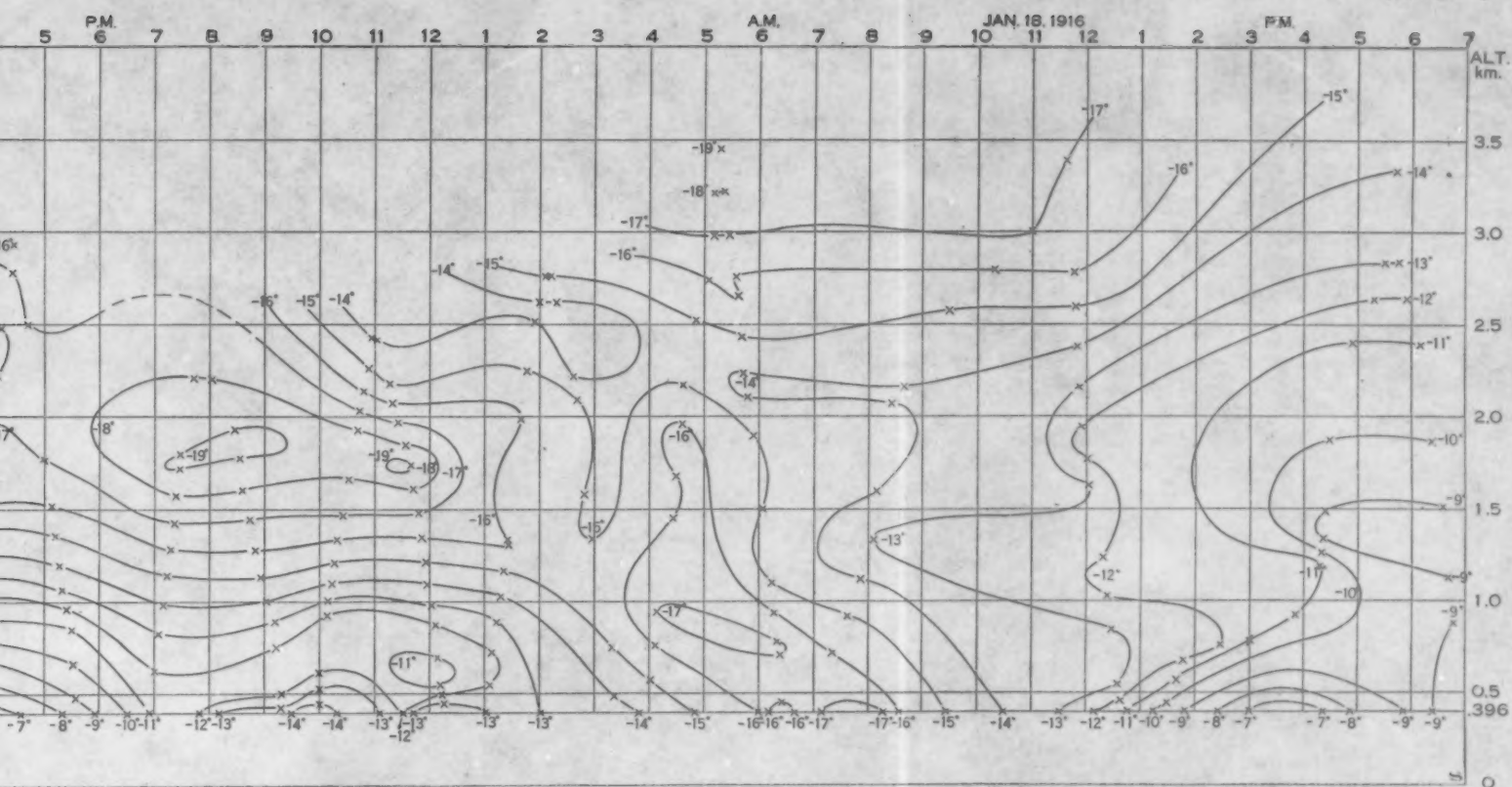


Fig. 1.—Free-air temperatures, °C., above Drexel Aerological Station; observed January 17-18, 1916.

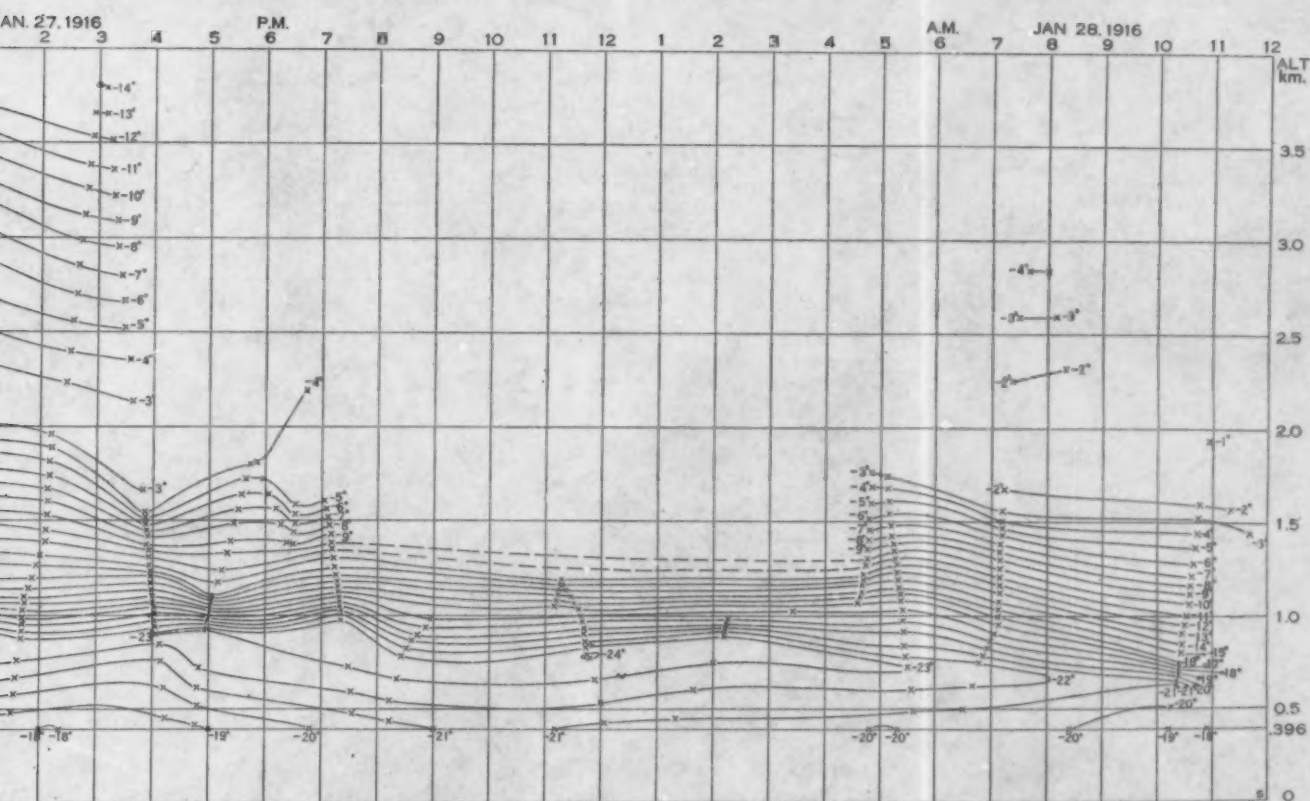
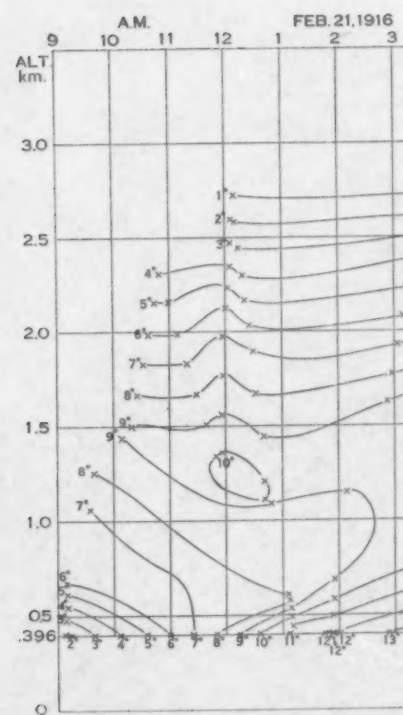
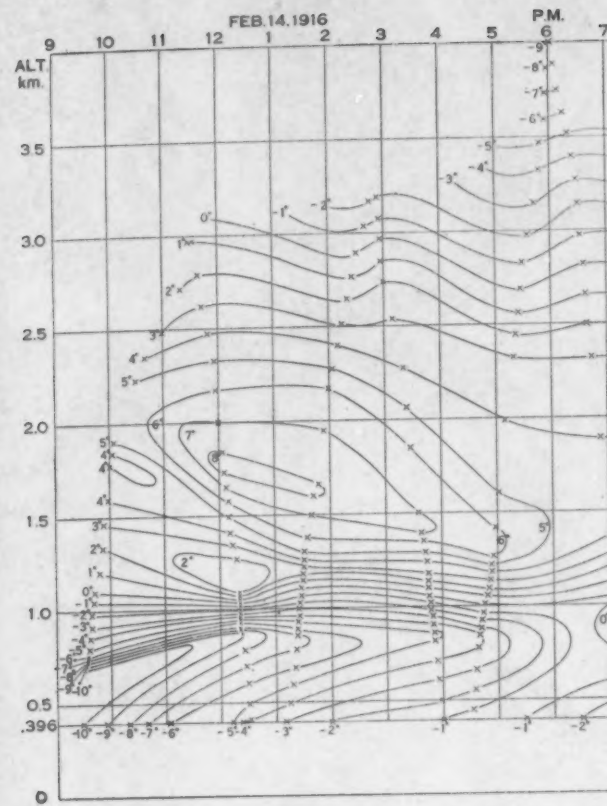


Fig. 2.—Free-air temperatures, °C., above Drexel Aerological Station; observed January 27-28, 1916.



M. W. R., Supplement No. 5.





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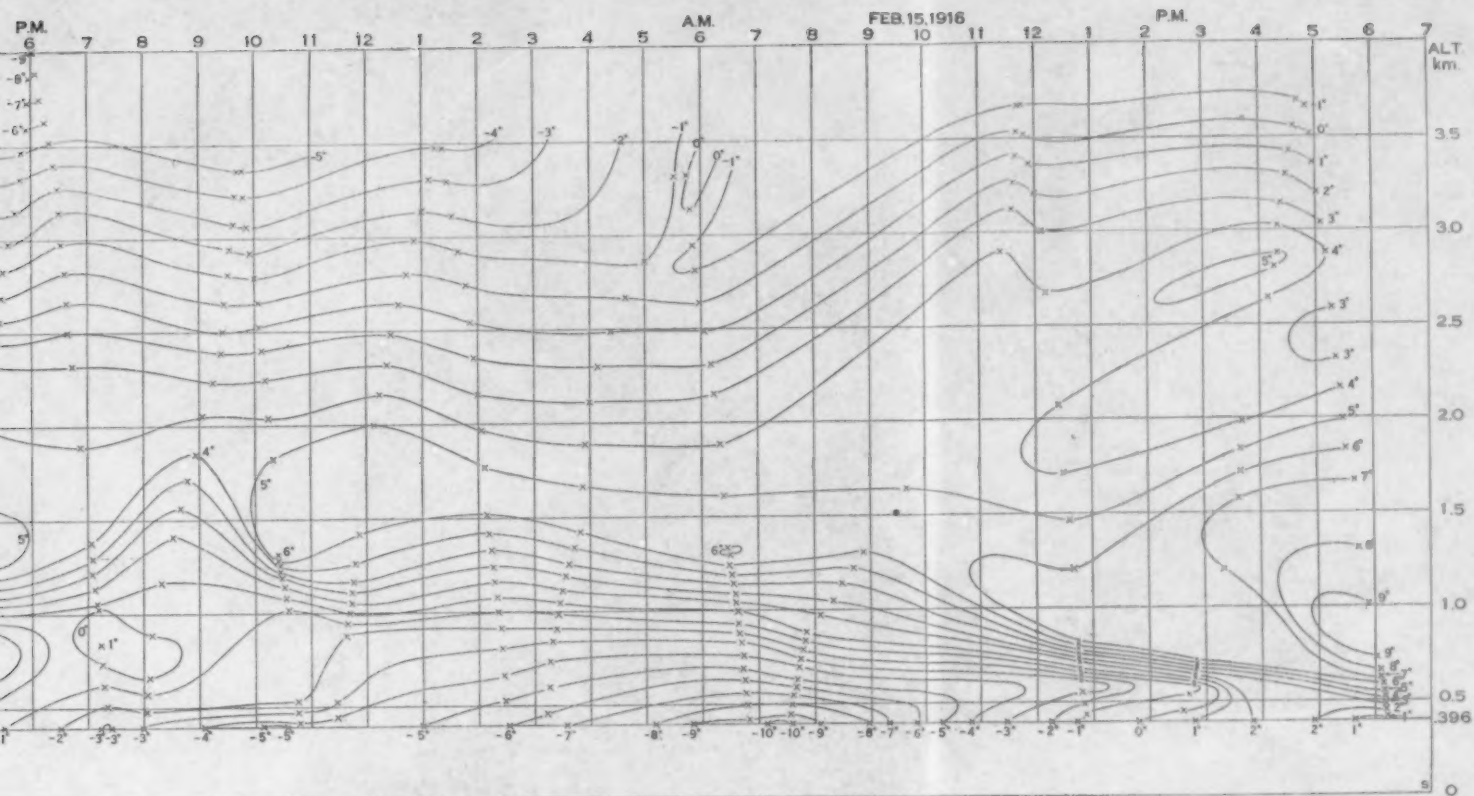


Fig. 3.—Free-air temperatures, °C., above Drexel Aerological Station; observed February 14-15, 1916.

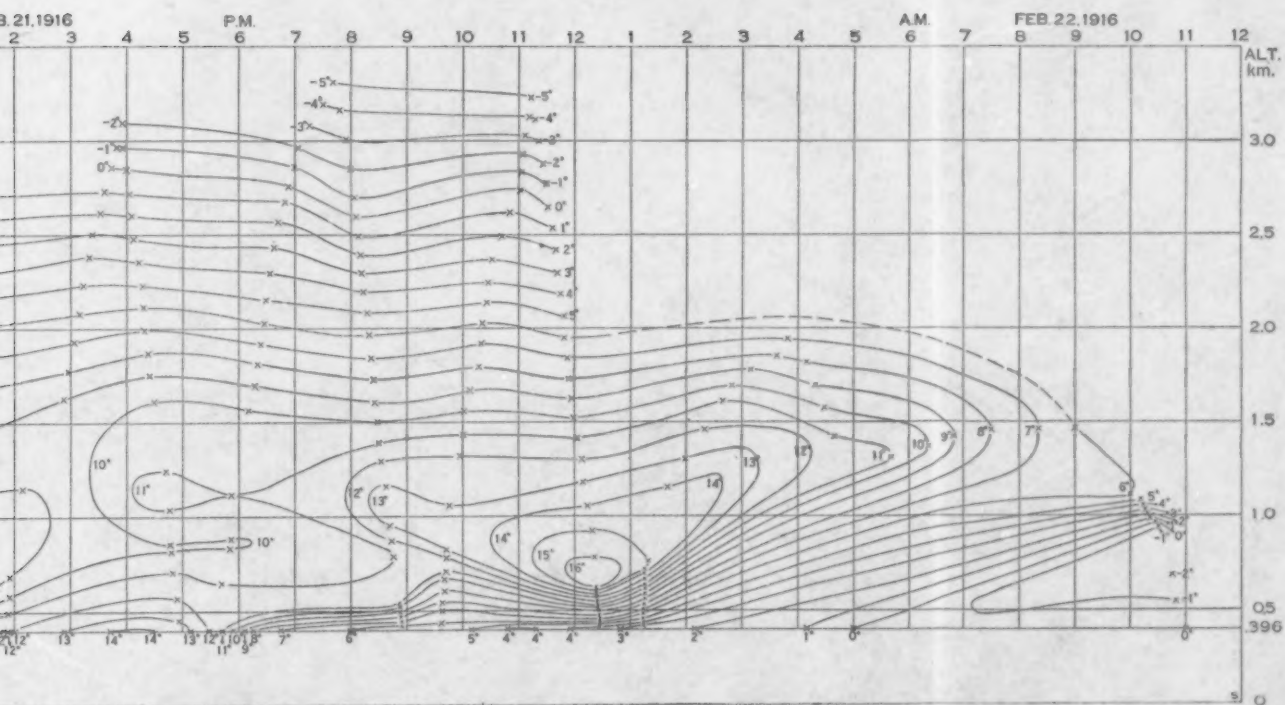
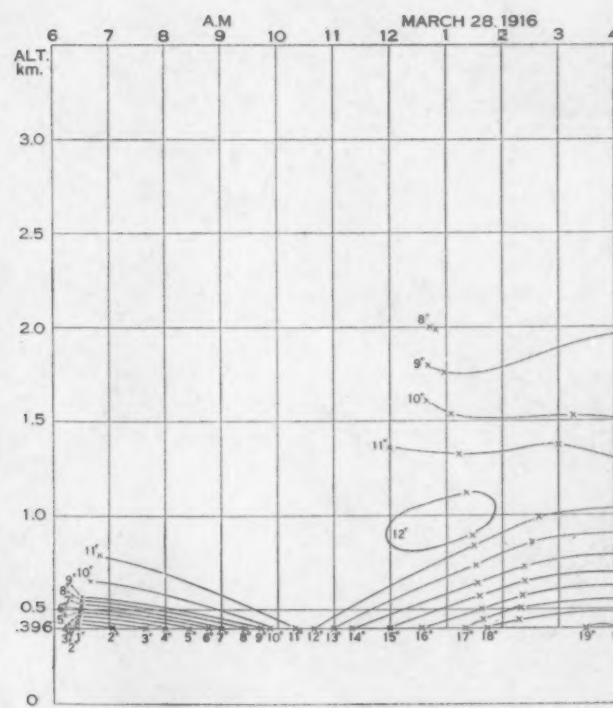
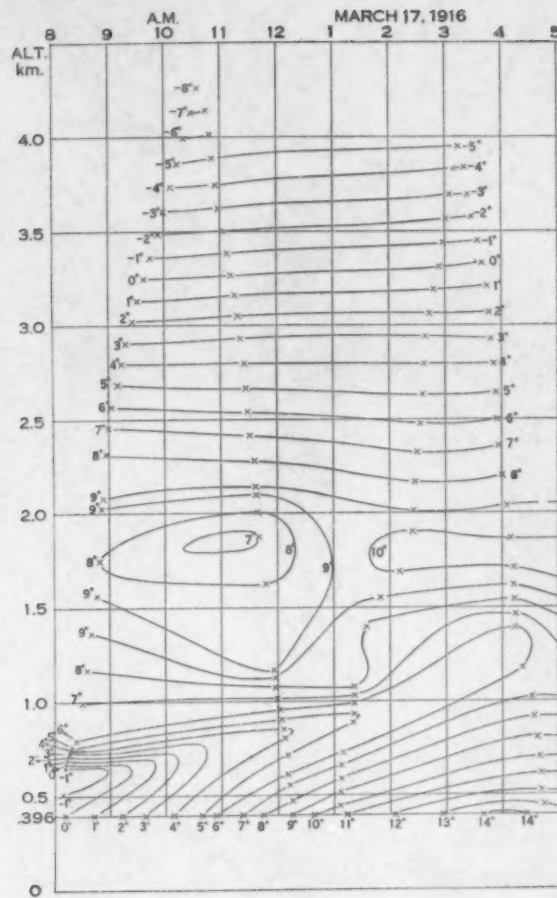


Fig. 4.—Free-air temperatures, °C., above Drexel Aerological Station; observed February 21-22, 1916.

M. W. R., Supplement No. 5.





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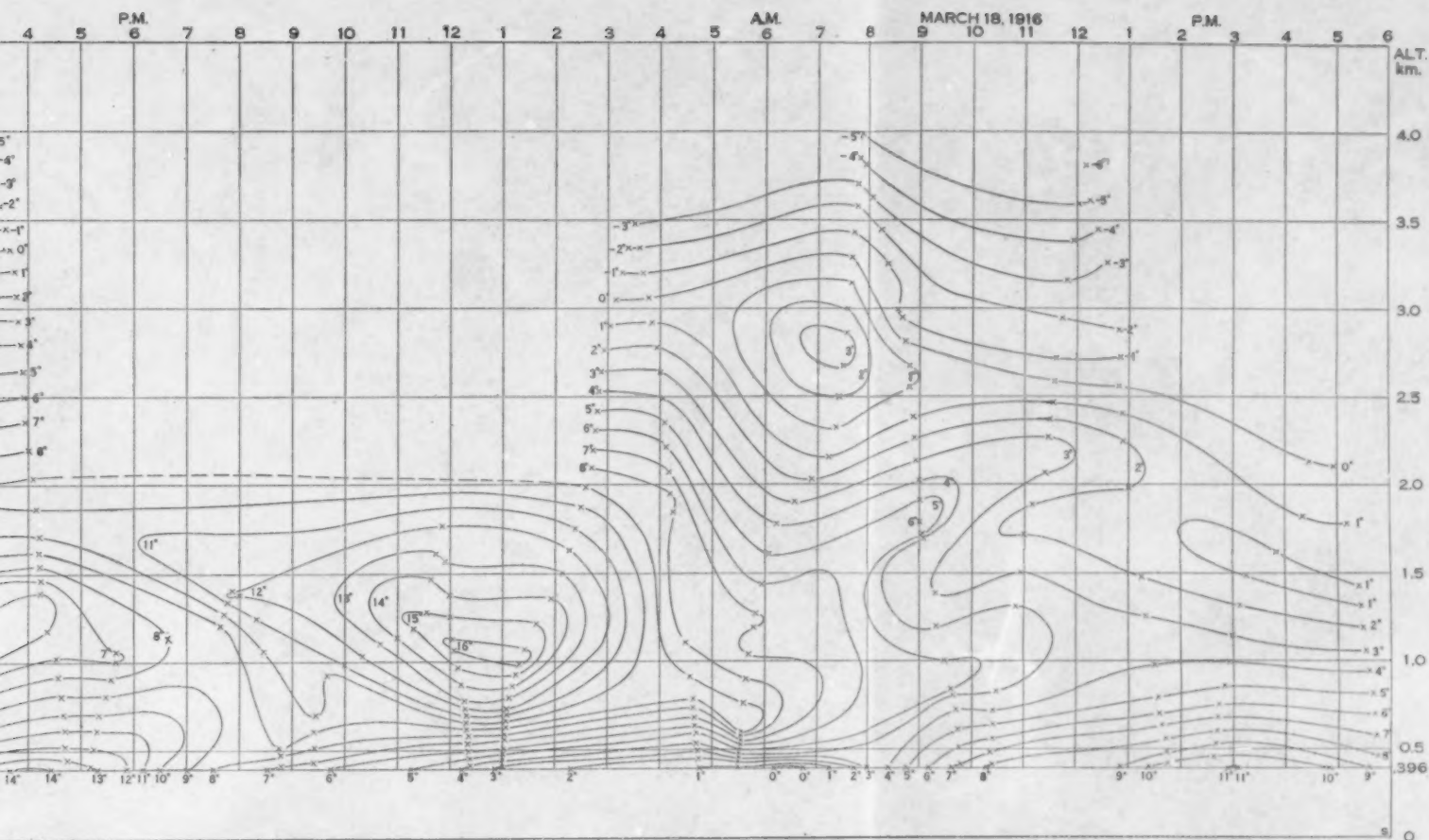


Fig. 5.—Free-air temperatures, °C., above Drexel Aerological Station; observed March 17-18, 1916

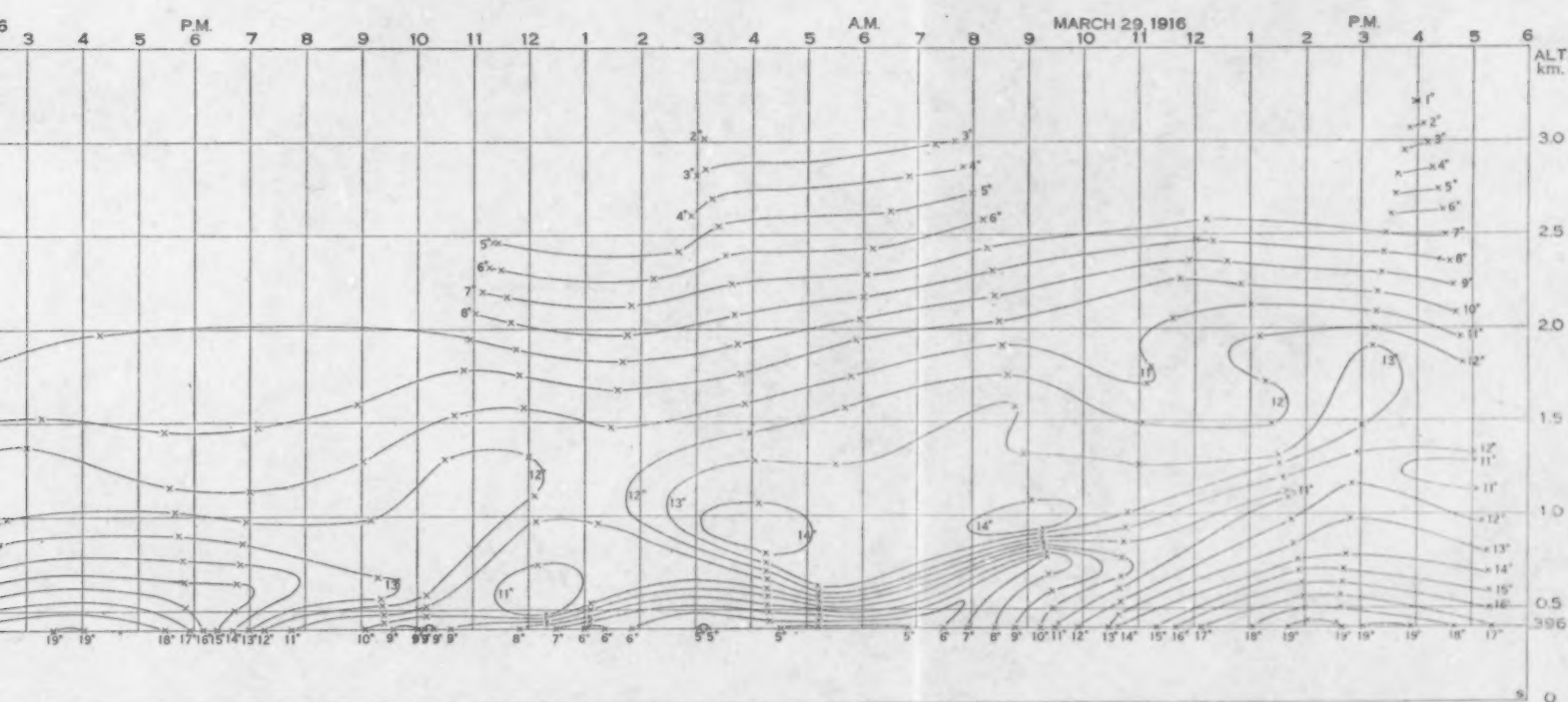


Fig. 6.—Free-air temperatures, °C., above Drexel Aerological Station; observed March 26-29, 1916.





## OBSERVATIONS AT DREXEL, JANUARY, 1916.

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TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916.

January 1, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Relative humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
11:20	949.3	3.3	100	sw.	4.5	396	949.3	3.3		100	7.74	sw.	4.5	388	0	9/10 St., ssw.
						500	936.8	2.6		100	7.37	sw.	7.7	490	0	Clouds very low, reaching sur- face at times.
11:28	949.3	3.3	100	sw.	4.5	707	913.5	1.4	0.61	100	6.76	wsww.	14.0	595	0	
						750	918.0	1.2		100	6.66	wsww.	14.3	735	0	
						1,000	880.3	-0.1		100	6.06	w.	15.9	980	0	
11:35	949.3	3.6	100	sw.	4.0	1,091	870.8	-0.6	0.52	100	5.81	w.	16.5	1,070	0	
11:43	949.3	3.6	100	sw.	4.0	1,138	865.6	1.5	-4.47	85	5.79	w.	18.0	1,116	0	St., clouds dissipating.
						1,250	853.9	1.4		78	5.27	wsww.	17.9	1,225	0	
						1,500	827.9	1.3		63	4.23	wsww.	17.7	1,470	0	
11:51	949.3	3.7	100	sw.	4.9	1,603	817.3	1.2	0.06	57	3.80	sw.	17.6	1,571	0	9/10 St. Cu., sw.
						1,750	801.8	0.3		55	3.43	sw.	18.1	1,715	0	
						2,000	777.2	-1.3		50	2.74	sw.	18.9	1,960	0	
P. M.																
12:02	949.4	4.0	97	sw.	5.8	2,076	770.4	-1.8	0.63	49	2.58	sw.	19.1	2,024	0	3/10 St. Cu., wsw.
12:03	949.4	4.0	97	sw.	5.8	2,147	763.6	-1.0	-1.13	48	2.70	sw.	18.0	2,104	0	
						2,250	753.6	-1.5		50	2.70		19.6	2,205	40	
						2,500	730.2	-2.7		53	2.59		22.8	2,450	860	
12:28	949.9	3.9	96	wsww.	6.3	2,609	720.9	-3.2	0.48	55	2.57		24.3	2,556	540	
						2,750	708.0	-3.4		57	2.62		26.7	2,694	1,700	
12:38	950.1	3.9	93	wsww.	7.2	2,801	703.2	-3.5	-0.04	58	2.64		27.5	2,744		10/10 St. Cu., wnw.
						2,750	707.8	-3.6		59	2.67		26.9	2,694		
12:50	950.4	3.1	94	wnw.	10.3	2,542	725.9	-4.1	0.67	63	2.73	w.	24.2	2,491		Clouds lowering.
						2,500	729.8	-3.8		63	2.80	w.	23.8	2,450		
						2,250	753.0	-2.2		61	3.10	w.	21.5	2,205		
12:55	950.5	2.7	96	wnw.	10.3	2,242	753.8	-2.1	-0.37	61	3.13	w.	21.4	2,197		
1:01	950.6	2.5	95	wnw.	8.9	2,052	772.0	-2.8	-1.20	57	2.76	w.	20.4	2,011		
						2,000	777.2	-3.4		62	2.85	w.	19.8	1,960		
1:03	950.7	2.5	95	wnw.	9.8	1,902	787.1	-4.6	0.62	72	2.99	w.	18.6	1,864	1,540	
						1,750	802.2	-3.6		76	3.44	w.	18.1	1,715	1,420	
						1,500	827.9	-2.1		82	4.21	wnw.	17.3	1,470	1,220	
1:18	951.0	2.2	91	wnw.	8.5	1,245	855.2	-0.5	-1.05	88	5.16	wnw.	16.5	1,222	860	
1:25	951.2	2.1	91	wnw.	10.7	1,054	876.1	-2.5	0.48	88	4.36	wnw.	19.8	1,033	221	
						1,000	882.0	-2.3		91	4.59	wnw.	19.1	990	60	
1:34	951.4	2.0	93	wnw.	13.4	802	904.4	-1.3	0.44	100	5.48	wnw.	16.6	786	0	Altitude of St. Cu. base about 600 m.
						750	920.3	-1.1		99	5.51	wnw.	16.0	735	0	
						500	939.1	0.0		94	5.74	wnw.	12.9	490	0	
1:42	951.6	0.5	92	wnw.	11.6	396	951.6	0.5		92	5.82	wnw.	11.6	388		

January 2, 1916.

A. M.																
9:27	974.3	-4.5	88	w.	4.5	396	974.3	-4.5		88	3.69	w.	4.5	388		Cloudless.
9:33	974.3	-4.3	88	w.	4.0	486	963.3	-5.0	0.56	86	3.45	wnw.	6.5	466		
						500	961.7	-4.7		85	3.50	wnw.	6.8	490	0	
						750	932.2	0.8		70	4.53	w.	12.5	735	0	
9:42	974.4	-4.0	86	w.	4.5	823	923.5	2.4	-2.20	66	4.79	w.	14.1	807	26	
						1,000	903.3	1.3		60	4.03	w.	14.2	980	134	
9:49	974.5	-3.8	86	w.	4.0	1,205	880.9	0.1	0.60	54	3.32	w.	14.4	1,181	260	
						1,250	875.2	-0.2		54	3.25	w.	14.4	1,225	320	
						1,500	848.7	-2.1		56	2.87	w.	14.6	1,470	720	
10:04	974.6	-3.5	84	w.	4.5	1,671	830.9	-3.3	0.73	57	2.64	w.	14.7	1,638	1,000	
						1,750	822.6	-3.5		57	2.60	w.	16.2	1,715	1,120	
						2,000	797.1	-4.1		57	2.47	wnw.	21.1	1,960	1,490	
10:18	974.6	-3.2	82	w.	2.7	2,215	775.6	-4.7	0.26	57	2.35	wnw.	25.2	2,171	1,800	Cloudless.
						2,250	772.2	-4.9		57	2.31	wnw.	25.4	2,205	2,280	
10:45	974.6	-2.5	79	w.	3.1	2,504	747.6	-6.2	0.52	58	2.10	w.	26.7	2,454	2,980	
						2,750	724.6	-7.8		56	1.76	w.	27.0	2,694	3,310	
						3,000	701.9	-9.4		53	1.45	w.	27.3	2,939	3,630	
						3,250	679.2	-11.1		50	1.18	w.	27.6	3,184	3,950	
11:08	974.6	-2.2	79	w.	2.7	3,292	675.4	-11.4	0.73	50	1.14	w.	27.6	3,225	4,000	
						3,250	679.2	-11.1		49	1.15	w.		3,184	3,840	
						3,000	701.9	-9.1		46	1.29	w.		2,939	3,100	
						2,750	724.6	-7.1		43	1.44	w.		2,694	2,650	
11:46	974.4	-1.4	72	w.	2.2	2,552	742.7	-5.5	-0.60	40	1.51	w.		2,501	2,350	
11:48	974.4	-1.3	72	w.	2.2	2,502	747.6	-5.8	0.87	38	1.42	w.		2,452	2,290	
11:52	974.4	-1.2	70	wnw.	2.7	2,329	764.2	-4.3	-0.37	38	1.62	wnw.		2,282	2,070	
						2,250	772.2	-4.6		43	1.78	wnw.		2,205	1,970	
11:58	974.4	-1.2	69	wnw.	2.7	2,195	777.2	-4.8	0.40	47	1.92	wnw.		2,151	1,900	
						2,000	797.1	-4.0		48	2.10	wnw.		1,960	1,670	
						1,750	822.6	-3.0		49	2.33	w.		1,715	1,370	
P. M.																
12:06	974.4	-0.9	67	wnw.	2.7	1,716	825.8	-2.9	0.71	49	2.35	w.		1,682	1,330	
						1,500	848.7	-1.4		49	2.67	w.		1,470	1,090	
12:18	974.4	-0.7	68	w.	3.1	1,265	874.0	0.3	-0.06	49	3.06	w.		1,240	830	
						1,250	875.2	0.3		49	3.06	w.		1,225	820	
						1,000	903.3	0.2		48	2.98	w.		980	540	
12:28	974.4	-0.5	68	w.	3.6	916	912.8	0.1	-1.44	48	2.95	w.		898	460	
						750	932.2	-2.3		50	2.52	w.		735	320	
12:31	974.4	-0.4	66	w.	3.6	700	937.9	-3.0	0.92	50	2.38	w.		686	280	
						500	961.7	-1.2		59	3.26	w.		490	100	
12:39	974.4	-0.2	64	w.	3.6	396	974.4	-0.2		64	3.85	w.	3.6	388		3/10 Cl., wsw. Clouds increasing.



## SUPPLEMENT NO. 5.

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.  
January 3, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Elec. tric.	
A. M.	mb.	° C.	%	s.	m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
8:54.....	980.4	-4.1	94	s.	4.9	396	980.4	-4.1	.....	94	4.07	s.	4.9	388	.....	Cloudless.
						500	967.2	-1.4	.....	85	4.62	s.	5.5	490	0	
9:01.....	980.4	-3.7	90	s.	5.4	669	947.4	2.9	-2.56	70	5.27	s.	6.6	656	0	
9:05.....	980.4	-3.4	89	s.	5.4	885	945.6	1.8	6.88	65	4.52	s.	7.8	672	0	
						750	937.9	2.4	.....	62	4.50	s.	7.5	735	0	
9:21.....	980.5	-2.8	91	s.	6.3	967	913.2	4.6	-0.99	54	4.58	ssw.	6.6	948	200	
						1,000	909.2	4.5	.....	54	4.55	ssw.	6.8	980	240	
						1,250	882.0	3.4	.....	51	3.98	ssw.	8.2	1,225	500	
						1,500	855.1	2.2	.....	49	3.51	sw.	9.7	1,470	750	
						1,750	829.0	1.1	.....	46	3.05	sw.	11.1	1,715	1,010	
9:45.....	980.7	-1.9	92	s.	3.1	1,797	824.5	0.9	0.45	45	2.93	sw.	11.4	1,761	1,050	
9:48.....	980.7	-1.9	92	s.	3.6	1,880	816.0	1.0	-0.01	45	2.96	sw.	11.4	1,843	1,150	
						2,000	803.4	0.2	.....	45	2.79	sw.	11.6	1,960	1,220	
						2,250	778.6	-1.5	.....	45	2.43	wsu.	12.0	2,205	1,450	
9:55.....	980.8	-1.5	92	s.	4.0	2,437	761.1	-2.8	0.68	45	2.18	wsu.	12.3	2,388	1,600	Cloudless.
						2,500	754.7	-2.8	.....	46	2.23	wsu.	13.6	2,450	1,760	
10:06.....	980.8	-0.9	90	s.	2.7	2,576	747.8	-2.7	-0.07	47	2.29	wsu.	15.2	2,524	1,930	
						2,750	731.2	-3.4	.....	46	2.12	wsu.	15.9	2,694	2,320	
						3,000	708.2	-4.4	.....	44	1.86	w.	17.0	2,939	2,470	
						3,250	686.2	-5.5	.....	43	1.65	w.	18.1	3,184	2,720	
10:25.....	980.6	-0.2	87	s.	3.6	3,398	673.7	-6.1	0.41	42	1.53	w.	18.7	3,329	2,880	A.St. forming.
						3,500	665.1	-6.0	.....	38	1.40	w.	19.6	3,429	2,990	
10:30.....	980.6	-0.1	87	s.	3.1	3,531	662.7	-6.0	-0.08	37	1.36	w.	19.9	3,459	3,020	
						3,750	644.7	-7.5	.....	39	1.26	w.	19.8	3,673	3,260	
						4,000	624.3	-9.3	0.70	41	1.13	w.	19.7	3,918	3,540	
10:56.....	980.4	0.7	86	s.	3.6	4,232	605.8	-10.9	0.70	43	1.03	w.	19.6	4,145	3,800	Cloudless.
						4,000	624.3	-9.3	.....	41	1.13	w.	19.4	3,918	3,460	
						3,750	644.7	-7.5	.....	38	1.23	w.	19.1	3,673	3,080	
11:36.....	979.6	2.3	80	s.	4.5	3,697	648.9	-7.1	0.08	38	1.27	w.	19.0	3,621	3,000	
11:41.....	979.5	2.6	79	s.	4.5	3,567	659.7	-7.0	0.70	36	1.22	w.	21.4	3,494	2,800	
						3,500	665.1	-6.5	.....	37	1.31	w.	21.1	3,429	2,710	
						3,250	686.2	-4.6	.....	39	1.62	w.	20.0	3,184	2,360	
NOON.....	979.0	3.1	81	s.	5.4	3,196	691.3	-4.4	0.00	39	1.65	w.	19.9	3,131	2,290	
P. M.																
12:04.....	978.9	3.2	81	s.	5.4	3,068	702.5	-4.4	0.52	44	1.86	w.	16.5	3,006	2,110	
						3,000	708.2	-4.0	.....	44	1.92	w.	16.3	2,939	2,010	
						2,750	731.2	-2.7	.....	44	2.15	wsu.	15.8	2,694	1,810	
						2,500	754.7	-1.4	.....	44	2.39	sw.	15.2	2,450	1,620	
12:25.....	978.5	4.5	73	s.	4.5	2,416	762.6	-1.0	0.66	44	2.47	sw.	15.0	2,367	1,550	
						2,250	778.6	0.1	.....	42	2.58	sw.	16.6	2,205	1,430	
						2,000	802.8	1.8	.....	38	2.64	sw.	19.1	1,960	1,260	
12:42.....	978.1	4.5	70	s.	7.2	1,902	812.7	2.2	-0.15	37	2.69	sw.	20.1	1,864	1,190	
12:50.....	977.9	4.8	63	s.	6.7	1,768	826.1	2.4	0.57	35	2.51	sw.	20.1	1,733	1,100	
						1,750	827.7	2.3	.....	35	2.52	sw.	20.0	1,715	1,080	
						1,500	853.4	3.7	.....	33	2.63	ssw.	18.5	1,470	850	
1:04.....	977.6	5.3	64	ssw.	6.3	1,418	862.2	4.2	-0.49	32	2.64	ssw.	18.1	1,390	780	
1:06.....	977.6	5.4	64	ssw.	6.3	1,337	870.9	3.8	0.49	31	2.49	ssw.	17.6	1,311	700	
						1,250	880.0	4.2	.....	32	2.64	ssw.	.....	1,225	600	
1:15.....	977.3	5.5	64	ssw.	8.5	1,091	897.2	5.0	-1.01	34	2.96	ssw.	.....	1,070	309	
						1,000	907.2	4.1	.....	35	2.87	ssw.	.....	980	250	
1:17.....	977.3	5.6	65	ssw.	8.5	932	914.9	3.4	0.36	35	2.73	ssw.	.....	914	160	
1:20.....	977.3	5.6	65	ssw.	8.9	820	927.6	3.8	-3.19	37	2.97	ssw.	.....	804	0	
1:24.....	977.1	5.7	66	ssw.	7.6	773	932.9	2.3	0.95	40	2.88	ssw.	.....	758	0	
						750	935.5	2.5	.....	41	3.00	ssw.	.....	735	0	
						500	964.9	4.9	.....	57	4.94	ssw.	.....	490	0	
1:29.....	977.1	5.9	64	ssw.	8.9	396	977.1	5.9	.....	64	5.95	ssw.	8.9	388	.....	Cloudless.

January 4, 1916.

A. M.																
10:07.....	960.1	6.8	97	WSW.	6.7	396	960.1	6.8	.....	97	9.58	WSW.	6.7	388	.....	10/10 St., sw.
						500	948.0	6.4	.....	95	9.13	WSW.	8.9	490	0	Altitude of St. base about 600 m.
						750	919.8	5.3	.....	89	7.93	sw.	14.3	735	0	
10:20.....	960.0	7.4	95	WSW.	6.7	900	902.8	4.7	0.42	85	7.26	sw.	17.5	882	0	10/10 St. Cu., sw.
						1,000	891.9	8.1	.....	70	7.56	sw.	16.0	990	0	Cl. from sw. observed above
10:31.....	959.9	7.5	95	SW.	8.0	1,214	869.2	15.4	-3.41	37	6.48	sw.	12.7	1,190	0	St. Cu.
						1,250	865.3	15.4	.....	36	6.30	sw.	12.4	1,225	0	
						1,500	840.2	15.7	.....	31	5.53	sw.	10.3	1,470	10	
10:50.....	959.8	8.2	91	SW.	9.4	1,543	836.2	15.8	-0.12	30	5.38	sw.	9.9	1,512	30	
						1,750	816.1	14.2	.....	29	4.70	sw.	10.4	1,715	110	
						2,000	792.3	12.2	.....	27	3.84	sw.	10.9	1,960	240	
11:04.....	959.7	8.6	90	SW.	10.3	2,129	780.3	11.2	0.78	26	3.46	sw.	11.2	2,086	330	3/10 Cl., sw.; 6/10 St. Cu., sw.
						2,250	768.9	10.3	.....			sw.	12.5	2,205	430	
						2,500	745.8	8.3	.....			sw.	15.1	2,450	530	
						2,750	723.3	6.3	.....			sw.	17.7	2,694	690	10/10 St. Cu., sw.
11:35.....	959.3	9.4	86	WSW.	9.8	2,818	717.7	5.8	0.78			sw.	18.4	2,761	730	Altitude of St. Cu. base about
						3,000	701.6	4.5	.....			sw.	18.9	2,939	840	750 m.
						3,250	680.3	2.8	.....			sw.	19.7	3,184	1,000	
P. M.																
12:03.....	958.9	9.8	82	WSW.	10.7	3,283	677.7	2.6	0.69			SW.	19.8	3,216	.....	10/10 St. Cu., sw.
						3,500	659.6	1.2	.....			WSW.	20.9	3,429	.....	
						3,750	639.6	-0.4	.....			WSW.	22.2	3,673	.....	
						4,000	619.7	-2.1	.....			WSW.	23.4	3,918	.....	
12:23.....	958.4	9.7	82	WSW.	9.4	4,154	607.6	-3.1	0.65			WSW.	24.2	4,068	.....	1/10 Cl., sw.; 4/10 St. Cu., sw.
						4,000	619.1	-2.1	.....			WSW.	22.9	3,918	1,000	
						3,750	638.6	-0.5	.....			WSW.	20.8	3,673	940	
						3,500	658.3	1.1	.....			WSW.	18.7	3,429	790	3/10 Cl., sw.; few Cu., wsw.
						3,250	678.8	2.7	.....			WSW.	16.7	3,184	640	
1:10.....	957.2	11.0	80	WSW.	8.0	3,209	682.5	3.0	0.78			WSW.	16.4	3,144	610	
						3,000	700.0	4.6	.....			WSW.	15.5	2,939	480	
						2,750	721.3	6.5	.....			SW.	14.6	2,694	190	
						2,500	743.4	8.5	.....			SW.	13.6	2,450	100	
						2,250	766.2	10.4	.....			SW.	12.7	2,205	10	
1:33.....	956.9	11.3	77	WSW.	9.4	2,229	768.7	10.6	0.66			SW.	12.6	2,184	0	
						2,000	789.8	12.1	.....			SW.	11.8	1,960	0	
1:41.....	956.7	11.7	73	WSW.	10.3	1,746	814.1	13.8	-0.29			SW.	11.0	1,711	0	



## OBSERVATIONS AT DREXEL, JANUARY, 1916.

7

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.  
January 4, 1916—Continued.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.	
P. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
.....	.....	.....	.....	.....	.....	1,500	838.0	13.1	.....	.....	.....	sw.	13.5	1,470	0	
.....	.....	.....	.....	.....	.....	1,250	863.1	12.4	.....	.....	.....	wsu.	16.1	1,225	0	
1:50	956.5	12.2	72	wsu.	7.6	1,192	869.2	12.2	-1.48	.....	.....	wsu.	16.7	1,169	0	
.....	.....	.....	.....	.....	.....	1,000	889.7	9.4	.....	.....	.....	sw.	16.3	980	0	
2:04	956.3	12.1	72	wsu.	8.0	875	902.8	7.5	0.06	74	7.67	sw.	16.0	858	0	
.....	.....	.....	.....	.....	.....	750	917.0	8.7	.....	73	8.21	sw.	13.5	735	0	
.....	.....	.....	.....	.....	.....	500	944.6	11.1	.....	72	9.51	wsu.	8.4	490	0	
2:12	956.2	12.1	71	wsu.	6.3	396	956.2	12.1	.....	71	10.03	wsu.	6.3	388	.....	
4/10 Cl., wsw.																

January 5, 1916.

A. M.	Pressure.	Temperature.	Relative humidity.	Wind.	Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.	Wind.	Potential.	Remarks.
	mb.	°C.	%	Dir. Vel.	m.	mb.	°C.		Rel. Vap. pres.	Dir. Vel.	Grav. ity. Electric.	
8:52	972.4	-10.6	70	nnw. 10.7	396	972.4	-10.6		79 1.94	nnw. 10.7	388	8/10 A.Cu., wnw.; few Fr.Cu., nnw.
8:56	972.5	-10.7	81	n. 10.3	500	959.4	-12.0		80 1.74	nnw. 12.7	490	
					753	928.0	-15.2	1.29	82 1.33	n. 17.6	735	
					1,000	897.9	-16.6		82 1.16	n. 18.8	980	520
9:01	972.6	-11.1	78	n. 10.7	1,034	894.1	-16.8	0.57	82 1.14	n. 19.0	1,014	610
9:04	972.7	-11.2	79	n. 8.9	1,139	881.9	-14.8	-1.90	86 1.44	n. 18.7	1,117	900
					1,250	868.7	-15.0		85 1.40	n. 19.6	1,225	1,060
9:13	972.8	-10.9	82	n. 11.2	1,459	845.4	-15.3	0.16	84 1.34	n. 21.2	1,430	1,360
					1,500	840.9	-14.6		83 1.42	n. 21.4	1,470	1,440
					1,750	814.3	-10.3		80 2.02	nnw. 22.8	1,715	2,140
9:30	973.5	-10.8	79	n. 11.6	1,792	809.9	-9.6	-1.71	79 2.13	nnw. 23.0	1,756	2,250
					2,000	788.6	-10.1		78 2.00	nnw. 24.1	1,960	2,680
					2,250	763.5	-10.8		77 1.86	nnw. 25.5	2,205	3,200
10:00	974.4	-11.2	71	n. 8.9	2,422	746.8	-11.2	0.25	76 1.77	nnw. 26.4	2,373	
					2,250	764.2	-11.5		74 1.68	nnw. 19.1	2,205	3,660
10:32	974.5	-11.2	77	n. 10.3	2,215	768.1	-11.6	0.19	74 1.66	nnw. 17.7	2,171	3,550
					2,000	780.6	-11.2		73 1.70	nnw. 17.8	1,960	2,910
10:48	974.6	-11.2	74	nnw. 12.1	1,798	809.9	-10.8	-1.55	73 1.77	nnw. 17.8	1,762	2,570
					1,750	815.7	-11.6		72 1.62	nnw. 17.2	1,715	2,490
					1,500	842.6	-15.4		68 1.08	n. 14.6	1,470	2,090
10:52	974.6	-11.2	72	n. 12.1	1,488	843.7	-15.6	0.25	68 1.06	n. 14.5	1,459	2,050
					1,250	870.9	-15.0		67 1.11	n. 19.0	1,225	1,480
11:01	974.6	-10.9	70	n. 9.4	1,213	875.0	-14.9	-12.07	67 1.12	n. 19.7	1,189	1,360
11:08	974.7	-10.9	68	nnw. 9.8	1,184	878.4	-18.4	0.66	68 0.82	n. 16.6	1,161	1,250
					1,000	900.7	-17.2		71 0.95	nnw. 15.1	980	820
11:18	974.7	-10.8	72	n. 8.5	833	920.8	-16.1	1.19	74 1.10	nnw. 13.8	817	0
					750	931.0	-15.1		73 1.19	nnw. 13.3	735	0
					500	961.7	-12.1		72 1.55	nnw. 12.0	490	0
11:22	974.7	-10.9	71	nnw. 11.4	396	974.7	-10.9		71 1.70	nnw. 11.4	388	Few A.Cu., w.

January 6, 1916.

8:42	A. M.	974.0	-12.6	76	sso.	6.3	396	974.0	-12.6	76	1.56	sso.	6.3	388	10/10 A.St., w.
8:43		974.0	-12.6	77	sso.	6.3	491	961.9	-13.1	69	1.35	sso.	12.0	481	0
							500	960.3	-13.0	69	1.37	sso.	12.0	490	0
							750	929.8	-9.8	68	1.80	s.	9.5	735	0
8:58		974.0	-12.2	73	s.	5.4	876	914.9	-8.4	68	2.03	ssw.	8.4	859	0
							1,000	900.1	-7.8	67	2.11	ssw.	8.8	980	410
							1,250	872.0	-6.7	64	2.22	ssw.	9.6	1,225	1,200
9:14		974.1	-11.9	69	s.	4.9	1,857	860.3	-6.2	63	2.28	ssw.	9.9	1,330	1,500
							1,500	844.8	-7.2	68	2.26	sw.	9.8	1,470	2,000
9:42		974.4	-11.1	68	s.	5.8	1,614	832.7	-7.5	71	2.29	sw.	9.8	1,582	2,300
							1,750	818.2	-5.8	72	2.70	wsu.	8.0	1,715	3,200
10:42		974.5	-9.6	65	sso.	4.5	1,777	815.8	-5.5	72	2.76	wsu.	7.7	1,742	3,200
							2,000	792.2	-6.6	75	2.62	wsu.	9.1	1,960	4,100
							2,250	767.0	-6.9	77	2.63	wsu.	10.7	2,205	4,800
							2,500	742.7	-9.2	80	2.23	wsu.	12.4	2,450	5,520
							2,750	719.3	-10.5	83	2.06	wsu.	13.9	2,694	6,220
							3,000	696.2	-11.7	86	1.92	wsu.	15.5	2,939	7,120
10:53		974.4	-9.5	65	sso.	4.5	3,152	683.0	-12.5	88	1.82	wsu.	16.5	3,088	7,370
							3,250	674.2	-11.5	89	2.02	wsu.	16.7	3,184	7,640
10:56		974.4	-9.4	65	sso.	4.5	3,351	665.5	-10.5	90	2.23	wsu.	17.0	3,283	7,900
							3,500	652.8	-11.1	88	2.07	wsu.	17.5	3,429	8,320
							3,750	631.9	-12.1	86	1.85	w.	18.3	3,673	
							4,000	611.3	-13.0	84	1.66	w.	19.0	3,918	
P. M.															
12:06		974.0	-8.0	58	s.	4.5	4,148	590.4	-13.6	82	1.54	w.	19.5	4,062	1/10 Cl.St., w.; 2/10 A.St., w.; 7/10 A.Cu., wsw.
							4,000	611.3	-13.0	82	1.62	w.	18.7	3,918	8,900
12:21		973.9	-8.0	55	s.	4.9	3,824	625.2	-12.4	81	1.69	w.	17.8	3,746	8,230
							3,750	631.8	-12.6	81	1.66	w.	17.7	3,673	8,020
12:26		973.8	-8.0	55	ssw.	5.8	3,500	652.3	-13.2	82	1.60	wsu.	17.4	3,429	7,180
							3,287	670.4	-13.7	83	1.54	wsu.	17.2	3,220	6,430
							3,250	673.7	-13.5	84	1.59	wsu.	17.2	3,184	6,320
							3,000	695.7	-11.9	89	1.95	wsu.	17.0	2,939	5,420
12:35		973.8	-8.0	53	ssw.	4.9	2,750	719.1	-10.4	95	2.38	wsu.	16.8	2,694	4,600
							2,522	741.0	-9.0	100	2.84	wsu.	16.7	2,471	3,800
							2,500	742.7	-8.8	100	2.89	wsu.	16.5	2,450	3,680
							2,250	767.0	-6.6	100	3.50	wsu.	13.8	2,205	2,140
12:53		973.6	-8.2	55	s.	5.4	2,197	772.2	-6.2	100	3.62	wsu.	13.3	2,153	1,800
12:58		973.6	-8.2	53	ssw.	4.9	2,047	787.3	-6.8	97	3.34	sw.	12.4	2,006	1,600
							2,000	792.2	-6.8	96	3.30	sw.	12.3	1,960	1,530
							1,750	818.2	-6.6	93	3.26	sw.	11.7	1,715	1,190
1:06		973.6	-7.9	50	ssw.	4.5	1,690	824.2	-6.6	92	3.22	sw.	11.6	1,656	1,100
							1,500	844.8	-6.2	87	3.15	sw.	10.1	1,470	870
1:12		973.6	-8.0	48	ssw.	4.5	1,276	869.0	-5.8	82	3.05	ssw.	8.4	1,251	590
							1,250	872.0	-6.1	81	2.96	ssw.	8.3	1,225	560
							1,000	900.1	-9.0	72	2.04	s.	7.6	980	260
1:28		973.6	-7.7	47	ssw.	5.8	772	927.4	-11.7	64	1.43	s.	7.0	757	0
							750	929.8	-11.5	63	1.43	s.	6.9	735	0
							500	960.3	-8.9	55	1.57	ssw.	5.8	490	0
1:34		973.6	-7.8	49	ssw.	5.4	396	973.6	-7.8	49	1.54	ssw.	5.4	388	5/10 A.St., w.; 5/10 A.Cu., w.

## SUPPLEMENT NO. 5.

TABLE 2.—Free-air data from kite flights at Drezel Aerological Station, January, 1916—Continued.

January 7, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- per- ature.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- per- ature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%	s.	m. p. s.	m.	mb.	° C.		%	mb.	s.	m. p. s.	10 <sup>6</sup> ergs.	volts.	
8:42.....	982.4	-7.1	97	s.	3.1	396	982.4	-7.1	.....	97	3.25	s.	3.1	388	.....	Few St.Cu. on se. horizon.
		-3.6				500	969.7	-6.3	.....	89	3.20	s.	4.3	490	0	
10:13.....	983.4		80	ssw.	4.5	626	955.2	-5.3	-0.78	79	3.09	ssw.	5.7	614	0	
						750	940.0	-5.1	.....	82	3.26	ssw.	6.8	735	160	
10:30.....	983.4	-3.0	74	ssw.	4.9	1,000	910.8	-4.8	.....	88	3.59	sw.	9.1	980	470	3/10 St.Cu., wsw.
						1,255	881.9	-4.4	-0.14	95	4.01	sw.	11.4	1,230	800	
10:30.....	983.4					1,500	854.5	-5.4	.....	95	3.69	sw.	10.0	1,470	1,100	Altitude of St.Cu., base about 1,600 m.
10:32.....	983.4	-3.2	73	ssw.	5.4	1,617	842.1	-5.9	0.41	95	3.52	sw.	9.4	1,585	1,250	
						1,750	827.9	-5.5	.....	83	3.19	wsww.	9.9	1,715	1,370	
						2,000	802.1	-4.8	.....	60	2.45	w.	10.8	1,960	1,620	
11:13.....	983.2	-2.0	61	sw.	5.4	2,056	796.4	-4.6	-0.30	55	2.28	w.	11.0	2,015	1,680	Few St.Cu., wsw.
						2,250	776.8	-5.7	.....	54	2.04	w.	10.4	2,205	1,880	
11:46.....	982.7	-1.2	63	s.	5.4	2,386	763.4	-6.5	0.58	53	1.87	w.	9.9	2,338	2,300	
						2,500	752.0	-6.9	.....	52	1.77	w.	10.9	2,450	2,520	
						2,750	728.2	-7.8	.....	51	1.61	w.	13.0	2,694	2,950	
						3,000	705.2	-8.7	.....	50	1.46	w.	15.1	2,939	3,350	
						3,250	683.0	-9.5	.....	49	1.33	w.	17.2	3,184	3,500	
						3,500	661.3	-10.4	.....	48	1.20	w.	19.3	3,429	4,240	
P. M.																
12:08.....	982.4	-0.7	64	s.	4.5	3,712	643.2	-11.2	0.35	47	1.10	w.	21.1	3,636	4,600	
						3,750	640.2	-11.4	.....	47	1.08	w.	21.2	3,673	4,650	
						4,000	619.9	-12.8	.....	47	0.95	w.	21.9	3,918	5,100	
						4,250	600.2	-14.1	.....	47	0.84	w.	22.6	4,162	5,370	
						4,500	580.7	-15.5	.....	47	0.74	w.	23.3	4,407	5,730	
12:31.....	982.1	-0.2	65	s.	6.3	4,620	571.1	-16.1	0.48	47	0.70	w.	23.6	4,524	5,900	
						4,500	580.7	-15.6	.....	45	0.70	w.	23.0	4,407	5,530	
						4,250	600.2	-14.5	.....	42	0.73	w.	21.8	4,162	4,740	
1:00.....	981.8	-0.1	66	s.	6.3	4,050	615.7	-13.7	0.63	39	0.73	w.	20.9	3,967	4,100	
						4,000	619.9	-13.4	.....	39	0.75	w.	20.6	3,918	3,940	
						3,750	640.2	-11.9	.....	39	0.85	w.	19.3	3,673	3,360	
						3,500	661.3	-10.3	.....	40	1.01	w.	18.1	3,429	2,990	
						3,250	683.0	-8.7	.....	40	1.16	w.	16.8	3,184	2,620	
1:22.....	981.7	0.4	65	s.	7.6	3,028	703.2	-7.3	0.33	40	1.32	w.	15.7	2,967	2,300	
						3,000	705.2	-7.2	.....	40	1.33	w.	15.5	2,939	2,280	
						2,750	728.2	-6.3	.....	40	1.44	w.	13.0	2,694	2,060	
						2,500	752.0	-5.5	.....	40	1.54	w.	10.6	2,450	1,850	
1:35.....	981.0	0.7	64	ssw.	6.7	2,369	764.9	-5.1	0.06	40	1.69	w.	9.4	2,321	1,700	
						2,250	776.5	-5.0	.....	41	1.64	w.	9.0	2,205	1,600	
1:42.....	981.5	0.7	63	ssw.	7.2	2,201	781.4	-5.0	0.53	41	1.64	w.	8.9	2,157	1,550	
						2,000	801.4	-3.9	.....	41	1.81	w.	9.1	1,960	1,360	
1:49.....	981.5	0.8	62	ssw.	8.5	1,771	825.0	-2.7	0.00	42	2.05	w.	9.3	1,736	1,150	Few St.Cu., wsw.
						1,750	827.0	-2.7	.....	42	2.05	w.	9.3	1,715	1,130	
1:53.....	981.4	0.8	62	ssw.	8.5	1,544	848.9	-2.7	-0.66	43	2.10	wsww.	8.8	1,513	940	
						1,500	853.0	-3.0	.....	45	2.14	wsww.	8.8	1,470	910	
						1,250	880.7	-4.7	.....	55	2.27	sw.	8.8	1,225	690	
1:56.....	981.4	0.8	62	ssw.	7.2	1,243	881.9	-4.7	0.64	55	2.27	sw.	8.8	1,219	680	
2:02.....	981.4	0.8	62	s.	8.0	1,072	901.2	-3.6	-0.43	57	3.93	ssw.	9.9	1,051	480	
						1,000	909.4	-3.9	.....	59	3.92	ssw.	9.5	960	380	
2:04.....	981.4	0.8	62	s.	8.5	898	922.7	-4.4	0.60	92	3.88	ssw.	8.8	869	220	
						750	938.8	-3.6	.....	93	4.20	s.	8.2	735	40	
2:10.....	981.4	0.8	64	s.	6.7	719	942.4	-3.4	1.33	93	4.28	s.	8.0	705	0	
						500	968.7	-0.5	.....	72	4.22	s.	7.7	490	0	
2:14.....	981.4	0.9	63	s.	7.6	396	981.4	0.9	.....	63	4.11	s.	7.6	388	.....	

January 8, 1916.

P. M.																		
12:57	977.3	-2.4	100	s.	6.7	396	977.3	-2.4	100	5.00	s.	6.7	388	10/10 St., s.				
						500	964.2	-3.1	100	4.71	s.	8.1	490	Alt. of St. base about 500 m.				
						750	934.3	-4.9	100	4.05	ssw.	11.3	735					
1:06	977.2	-2.3	100	s.	6.7	869	920.3	-5.7	0.70	100	3.78	ssw.	12.8	852	1,110			
						1,000	905.1	-2.0		85	4.39	ssw.	14.5	980	1,150			
1:08	977.1	-2.3	100	s.	6.7	1,164	886.7	2.7	-2.85	65	4.82	ssw.	16.5	1,141	1,200			
						1,250	877.3	3.3		58	4.49	ssw.	17.5	1,225	1,290			
1:11	977.1	-2.2	100	s.	7.2	1,473	853.8	4.7	-0.65	39	3.33	ssw.	19.9	1,444	1,500			
						1,500	850.4	4.6		38	3.22	ssw.	19.9	1,470	1,530			
						1,750	824.6	3.3		32	2.48	ssw.	20.1	1,715	1,750			
						2,000	799.7	2.0		27	1.91	ssw.	20.3	1,960	1,910			
1:25	976.8	-2.3	100	ssw.	5.8	2,065	793.2	1.6	0.52	25	1.72	ssw.	20.4	2,024	1,950			
						2,250	775.3	0.9		47	3.06	ssw.	19.1	2,205	2,110			
1:37	976.5	-2.3	100	ssw.	6.7	2,443	756.7	0.2	0.37	69	4.28	ssw.	17.7	2,394	2,310			
						2,500	751.7	2.8		46	3.44	ssw.	19.2	2,450	2,370			
1:43	976.3	-2.2	100	s.	6.7	2,528	748.5	4.1	-4.59	34	2.78	ssw.	19.9	2,477	2,400			
1:58	976.0	-2.2	100	s.	7.2	2,588	743.6	3.5	0.81	15	1.18	ssw.	17.5	2,536				
2:01	976.0	-2.2	100	s.	7.6	2,524	750.0	3.9	-3.15	15	1.21	ssw.	17.5	2,473				
						2,600	751.7	3.2		19	1.46	ssw.	17.5	2,450				
2:04	976.0	-2.2	100	s.	6.3	2,435	758.3	1.1	-0.61	30	1.99	ssw.	17.5	2,386				
						2,250	775.3	2.1		37	2.63	ssw.	17.8	2,205				
						2,000	799.7	3.8		47	3.77	ssw.	18.3	1,960	1,470			
2:23	975.9	-2.2	100	s.	6.3	1,782	821.6	5.1	0.08	55	4.83	ssw.	18.7	1,747	1,350			
						1,750	824.6	5.1		53	4.66	ssw.	18.6	1,715	1,330			
						1,500	850.0	5.3		40	3.56	ssw.	18.1	1,470	970			
2:38	975.8	-2.0	100	s.	7.6	1,271	874.6	5.5	-0.39	27	2.44	ssw.	17.6	1,246	600			
						1,250	876.2	5.4		27	2.42	ssw.	17.4	1,225	580			
2:43	975.8	-2.0	100	s.	5.8	1,091	893.8	4.8	-4.23	26	2.24	ssw.	16.2	1,070	390			
						1,000	904.0	0.9		36	2.35	ssw.	14.8	960	290			
2:46	975.8	-2.1	100	s.	5.4	857	920.3	-5.1	0.67	51	2.03	s.	12.5	840	110			
						750	933.1	-4.4		62	2.62	s.	10.9	735	0			
						500	962.7	-2.7		59	4.34	s.	7.0	490	0			
2:57	975.7	-2.0	100	s.	5.4	396	975.7	-2.0		100	5.17	s.	5.4	388	10/10 St., s.			



## OBSERVATIONS AT DREXEL, JANUARY, 1916.

9

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.

January 9, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
11:45	954.0	2.4	100	s.	5.8	396	954.0	2.4		100	7.26	s.	5.8	388		Dense fog; light mist.
						500	941.1	2.1		100	7.11	s.	9.2	490	0	
						750	912.5	1.3		100	6.71	sw.	17.5	735	160	
11:51	953.9	2.5	100	s.	7.6	859	900.7	1.0	0.30	100	6.57	sw.	21.2	842	270	
						1,000	884.9	8.0		62	6.65	sw.	20.5	980	400	
11:57	953.8	2.6	100	s.	6.7	1,138	870.5	15.6	-5.23	25	4.43	sw.	19.8	1,116	540	
						1,250	868.8	16.9		22	4.24	sw.	19.1	1,225	570	
P. M.																
12:01	953.7	2.6	100	s.	11.6	1,297	854.8	17.4	-1.13	20	3.97	sw.	18.8	1,271	580	
12:13	952.9	3.0	100	ssw.	10.3	1,463	837.5	17.7	-0.18	11	2.23	sw.	16.2	1,434	660	
						1,500	833.7	17.5		11	2.20	sw.	15.9	1,470	680	10/10 St., ssw.; light fog; mist ended.
12:15	952.8	3.1	100	ssw.	10.3	1,624	822.0	17.0	0.43	11	2.13	sw.	15.0	1,592	770	
						1,750	809.8	17.3		11	2.17	sw.	14.9	1,715	880	
12:16	952.8	3.1	100	ssw.	11.2	1,821	803.3	17.4	-0.20	11	2.19	sw.	14.8	1,785	910	
						2,000	786.5	15.7		11	1.96	sw.	17.0	1,960	1,040	
						2,250	763.7	13.4		11	1.69	wsww.	20.1	2,205	760	
12:31	951.9	3.6	100	ssw.	13.4	2,381	751.3	12.2	0.93	11	1.56	wsww.	21.7	2,333	650	
						2,500	740.6	10.9		11	1.43	wsww.	21.7	2,450	750	
12:46	951.0	3.8	100	ssw.	12.5	2,670	725.0	9.1	0.90	11	1.27	wsww.	21.8	2,616	900	
						2,500	739.9	10.3				wsww.	20.1	2,450	740	
1:00	950.2	4.0	99	ssw.	12.5	2,366	751.3	11.3	0.57			wsww.	18.8	2,318	600	10/10 St., ssw.; fog ended; alt. of St. base about 500 m.
						2,250	761.8	12.0				wsww.	18.6	2,205	480	
						2,000	784.3	13.4				wsww.	18.2	1,960	70	
1:40	949.6	4.6	97	ssw.	8.9	1,750	807.7	14.9				wsww.	17.7	1,715	0	
						1,496	832.3	16.3	0.21			wsww.	17.2	1,466	0	Clouds changing to St. Cu.
						1,250	856.3	16.8				wsww.	16.4	1,225	0	
						1,000	882.2	17.3				sw.	15.7	980	0	
1:53	949.5	4.9	95	ssw.	9.4	974	884.7	17.4	-11.27			sw.	15.6	955	0	
1:55	949.4	5.0	94	ssw.	9.4	840	898.8	2.3	0.65			sw.	16.6	824	0	
						750	909.2	2.9				ssw.	15.2	735	0	Alt. of St. Cu. base about 650 m.
						500	937.1	4.5				ssw.	11.1	490	0	
2:05	949.2	5.2	94	ssw.	9.4	396	949.2	5.2		94	8.32	ssw.	9.4	388		10/10 St. Cu., ssw.

January 10, 1916.

A. M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.

January 11, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
8:40	966.3	-14.0	100	ne.	12.5	396	966.3	-14.0		100	1.81	ne.	12.5	388		10/10 St., eae.
						500	953.2	-14.5		100	1.73	ene.	13.2	490	0	
8:42	966.3	-13.9	100	ene.	11.2	632	936.6	-15.1	0.47	100	1.63	e.	14.1	620	0	
						750	923.0	-8.3		100	3.02	e.	15.0	735	0	
8:48	966.3	-13.9	100	ene.	10.7	797	916.9	-5.6	-5.76	100	3.81	e.	15.3	781	0	
8:52	966.2	-14.0	100	ene.	9.8	950	899.1	-4.5	-0.72	100	4.19	e.	18.0	931	170	
						1,000	893.2	-4.7		100	4.12	e.	18.1	980	220	
						1,250	864.3	-5.5		100	3.84	e.	18.2	1,225	490	
						1,500	837.1	-6.3		100	3.59	ese.	18.3	1,470	800	Alt. of St. base about 1,600 m.
						1,750	811.4	-7.1		100	3.35	ese.	18.4	1,715	1,070	
9:11	966.3	-13.7	100	ene.	10.7	1,902	796.2	-7.6	0.33	100	3.21	ese.	18.5	1,864	1,140	
						2,000	786.7	-6.8		100	3.44	ese.		1,960	1,180	
9:33	966.6	-13.5	100	ne.	11.2	2,205	766.3	-5.2	-0.65	100	3.94	se.		2,161	2,400	Alt. of St. base about 900 m.
						2,600	786.7	-6.2		100	3.62	se.		1,960	2,030	
10:01	966.9	-13.5	100	ne.	10.3	1,793	807.8	-7.3	0.47	100	3.29	se.		1,757	1,880	Alt. of St. base about 700 m.
						1,750	812.3	-7.1		100	3.35	se.		1,715	1,850	
						1,500	838.4	-5.9		100	3.71	ese.		1,470	1,680	
						1,250	865.7	-4.8		100	4.08	ese.		1,225	1,850	
10:54	966.9	-13.2	100	ne.	8.5	1,217	869.4	-4.6	-0.45	100	4.15	ese.		1,193	1,900	
11:10	966.7	-13.1	100	ne.	10.7	1,107	881.5	-5.1	0.43	100	3.98	ese.		1,085	1,210	
						1,000	895.6	-4.6		100	4.15	e.		980	540	Wire and kites heavily coated with ice.
11:22	966.5	-13.0	100	ne.	7.6	919	902.6	-4.3	-4.09	100	4.26	e.		901	0	
						750	923.0	-11.2		100	2.33	ene.		735	0	
11:28	966.3	-12.9	100	ne.	8.0	662	933.0	-14.8	0.75	100	1.68	ene.		649	0	Alt. of St. base about 700 m.
						500	953.2	-13.6		100	1.88	ne.		490	0	
11:34	966.2	-12.8	100	ne.	9.8	396	966.2	-12.8		100	2.02	ne.	9.8	388		10/10 St., ene.

January 12, 1916.

8:55	974.8	-25.0	100	nw.	13.4	396	974.8	-25.0		100	0.62	nw.	13.4	388	10/10 St., nw.
						500	960.7	-25.0		100		n.	14.0	490	Clouds reached nearly to surface.
						750	928.3	-18.5		100		ne.	15.4	735	
						1,000	898.1	-18.5		100		ne.	16.7	980	Snowing.
						1,250	868.1	-18.5		100		ne.	18.1	1,225	(*)
9:23	975.4	-25.3	100	nnw.	11.2	1,282	864.7	-18.5		100	1.19	n.	18.3	1,257	(*)
						1,500	839.7	-17.0		100	1.37	n.	18.2	1,470	(*)
9:26	975.4	-25.3	100	nnw.	10.7	1,725	815.1	-15.4	-0.70	100	1.59	nnw.	18.0	1,691	(*)
						1,750	812.5	-15.3		100	1.60	nnw.	17.5	1,715	(*)
						2,000	786.1	-14.7		100	1.70	nnw.	12.0	1,960	(*)
9:40	975.7	-25.5	100	nnw.	12.5	2,190	766.8	-14.2	-0.16	100	1.78	nnw.	9.8	2,146	(*)
						2,000	786.1	-14.3		100	1.76	nnw.	10.8	1,960	(*)
9:56	975.9	-25.6	100	nw.	8.9	1,871	800.0	-14.4	-1.11	100	1.74	nnw.	11.5	1,834	10,300
						1,750	812.5	-15.7		100	1.55	nnw.	12.7	1,715	10,600
10:05	976.0	-25.8	100	nw.	9.8	1,591	830.3	-17.5	-0.38	100	1.30	nnw.	14.3	1,559	11,000
						1,500	840.3	-17.9		100	1.26	n.	14.9	1,470	9,500
						1,250	868.8	-18.8		100	1.15	n.	16.7	1,225	5,400
10:22	976.0	-26.0	100	nw.	10.7	1,123	883.8	-19.3		100	1.10	nne.	17.6	1,101	3,600
						1,000	898.1	-19.3		100		nne.	16.4	980	4,480
						750	928.3	-15.7		100		nne.	14.0	735	6,330
						500	961.9	-15.7		100		n.	11.7	490	3,740
10:44	976.0	-25.7	100	nw.	10.7	396	976.0	-25.7		100	0.58	nw.	10.7	388	Snowing. 10/10 St., nw.

January 14, 1916 (No. 1).

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\* More than 10,000 volts.

## OBSERVATIONS AT DREXEL, JANUARY, 1916.

11

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.

January 14, 1916 (No. 1)—Continued.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
P. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
.....	.....	.....	.....	.....	.....	1,250	877.0	-10.5	.....	57	1.41	ssw.	.....	1,225	4,600	
.....	.....	.....	.....	.....	.....	1,000	906.1	-14.4	.....	57	0.99	ssw.	.....	980	3,240	
.....	.....	.....	.....	.....	.....	750	936.5	-18.4	.....	58	0.70	ssw.	.....	735	1,890	
12:12	982.3	-17.5	83	s.	4.9	685	944.9	-19.4	0.69	58	0.63	ssw.	.....	672	1,540	
12:14	982.3	-17.4	83	s.	5.8	500	968.5	-18.4	.....	74	0.89	s.	.....	490	600	
.....	.....	.....	.....	.....	.....	398	982.3	-17.4	.....	83	1.10	s.	5.8	388	.....	

January 14, 1916 (No. 2).

P. M.	Pressure.	Temperature.	Relative humidity.	Wind.	Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.	Wind.	Potential.	Remarks.
	mb.	° C.	%	Dir. Vel.	m.	mb.	° C.		Rel. Vap. pres.	Dir. Vel.	Gravity. Electric.	
1:01	981.4	-16.2	90	ssw. 5.8	396	981.4	-16.2		90 1.33	ssw. 5.8	388	4/10 Cl., wnw.
					500	967.4	-16.8		89 1.24	ssw.	490	
					750	935.9	-18.3		86 1.04	s.	735	
1:06	981.3	-16.7	90	ssw. 5.8	763	934.2	-18.4	0.60	86 1.03	s.	748	1,940
					1,000	905.0	-13.4		85 1.62	ssw.	980	3,080
1:23	981.0	-16.2	85	s. 4.5	1,053	898.8	-12.3	-2.10	85 1.79	sw.	1,032	3,300
					1,250	876.1	-8.4		83 2.48	sw.	1,225	4,280
1:33	980.8	-15.9	85	s. 4.9	1,500	848.2	-3.4		81 3.73	sw.	1,470	5,510
					1,576	840.4	-1.9	-1.99	80 4.18	sw.	1,545	5,870
1:50	980.6	-15.6	80	s. 4.5	1,750	821.9	-3.0		74 3.52	sw.	1,715	6,400
					2,000	796.1	-4.6		66 2.74	sw.	1,960	6,750
2:17	980.2	-15.3	81	s. 5.4	2,110	785.3	-5.3	0.64	62 2.42	sw.	2,068	6,900
					2,250	771.7	-6.2		61 2.21	sw.	2,205	7,410
2:47	979.9	-14.9	78	ssw. 5.4	2,500	747.1	-7.9		58 1.81	wsww.	2,450	8,280
					2,643	733.1	-8.8	0.66	57 1.65	wsww.	2,590	8,800
					2,750	723.1	-9.3		58 1.60	wsww.	2,694	8,890
					3,000	700.0	-10.5		60 1.49	wsww.	2,939	
					3,179	683.7	-11.4	0.56	61 1.40	wsww.	3,114	
					3,000	700.0	-10.3		60 1.52	wsww.	2,939	
					2,750	723.1	-8.7		59 1.72	wsww.	2,694	6,970
					2,500	746.3	-7.1		58 1.94	sw.	2,450	6,150
3:07	979.6	-14.6	77	ssw. 4.9	2,272	768.8	-5.7	0.61	57 2.15	sw.	2,227	5,400
					2,250	770.7	-5.6		57 2.17	sw.	2,205	5,340
					2,000	795.1	-4.1		56 2.42	sw.	1,960	4,670
					1,750	820.6	-2.6		55 2.71	sw.	1,715	4,000
3:16	979.5	-14.7	77	ssw. 4.5	1,728	823.5	-2.5	-0.24	55 2.73	sw.	1,694	3,940
					1,500	847.0	-3.1		58 2.73	sw.	1,470	3,290
3:24	979.4	-14.6	74	ssw. 5.4	1,439	853.9	-3.2	-3.53	59 2.76	sw.	1,411	3,080
					1,250	874.7	-9.9		61 1.60	sw.	1,225	2,440
3:30	979.3	-14.5	72	ssw. 4.9	1,207	879.7	-11.4	-1.36	61 1.40	sw.	1,183	2,260
					1,000	903.3	-14.2		62 1.10	ssw.	980	1,390
3:43	979.2	-14.6	77	ssw. 4.5	750	934.2	-17.6	0.82	64 0.83	s.	735	590
					500	965.6	-15.6		73 1.14	ssw.	490	180
3:46	979.2	-14.7	77	ssw. 4.5	396	979.2	-14.7		77 1.31	ssw.	388	10/10 A.St., wnw.

January 14, 1916 (No. 3).

P. M.	Pressure.	Temperature.	Relative humidity.	Wind.	Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.	Wind.	Potential.	Remarks.
	mb.	° C.	%	Dir. Vel.	m.	mb.	° C.		Rel. Vap. pres.	Dir. Vel.	Gravity. Electric.	
4:30	978.7	-15.1	85	ssw. 5.4	396	978.7	-15.1		85 1.39	ssw. 5.4	388	10/10 A.St., wnw.
					500	964.8	-15.7		86 1.33	ssw.	490	
4:52	978.5	-15.4	86	ssw. 4.9	712	938.2	-17.0	0.60	88 1.21	s.	698	
					750	933.3	-16.4		88 1.28	s.	735	1,800
					1,000	903.1	-12.7		88 1.80	ssw.	980	1,400
4:57	978.4	-15.4	84	ssw. 5.4	1,216	878.2	-9.4	-1.51	88 2.41	ssw.	1,192	2,500
					1,250	874.4	-8.6		88 2.59	ssw.	1,225	2,560
5:05	978.3	-15.4	85	ssw. 4.9	1,499	847.1	-2.7	-2.37	86 4.20	sw.	1,469	3,100
					1,750	820.1	-3.9		83 3.66		1,715	3,490
6:34	977.5	-15.6	88	ssw. 4.5	1,992	795.0	-5.1	0.48	80 3.18		1,952	3,740
					2,000	794.0	-5.1		80 3.18		1,960	3,750
6:35	977.5	-15.6	90	ssw. 4.5	2,142	779.9	-4.4	-0.47	78 3.29		2,099	3,900
					2,250	769.2	-4.9		77 3.12		2,205	
					2,500	745.1	-6.0		74 2.72		2,450	
					2,750	721.3	-7.2		71 2.36		2,694	
					3,000	698.3	-8.3		68 2.05		2,939	
6:42	977.4	-15.5	87	ssw. 4.5	3,030	695.8	-8.4	0.42	68 2.03		2,969	
					3,000	698.3	-8.3		68 2.05		2,939	
					2,750	721.3	-7.3		66 2.17		2,694	4,650
					2,500	744.9	-6.3		64 2.30		2,450	4,030
					2,250	768.5	-5.3		62 2.42		2,205	3,410
6:59	977.3	-15.5	86	ssw. 3.6	2,181	775.1	-5.0	-0.22	62 2.49		2,137	3,240
7:02	977.3	-15.4	86	ssw. 3.6	1,968	793.4	-5.4	0.48	63 2.44		1,958	2,820
7:05	977.3	-15.4	86	ssw. 3.1	1,833	810.1	-4.6	-0.08	64 2.66		1,797	2,570
					1,750	818.7	-4.7		66 2.72		1,715	2,440
7:14	977.4	-15.4	86	ssw. 3.1	1,595	835.2	-4.8	-3.72	70 2.86		1,563	2,200
					1,500	845.2	-4.3		72 2.17		1,470	2,080
7:16	977.4	-15.4	86	ssw. 3.1	1,423	853.9	-11.2	0.95	74 1.72		1,395	1,980
7:23	977.5	-15.4	88	ssw. 2.7	1,253	873.0	-10.6	-1.15	74 1.82		1,228	1,740
					1,000	902.0	-14.7		75 1.28		980	1,120
7:32	977.5	-15.3	90	ssw. 3.1	820	923.9	-15.6	-0.52	76 1.19	s.	804	680
					750	932.2	-16.0		77 1.16	s.	735	540
7:37	977.5	-15.4	90	ssw. 3.6	646	945.4	-16.5	0.44	78 1.12	ssw.	633	380
					500	963.1	-15.9		85 1.29	ssw.	490	160
7:42	977.6	-15.4	90	ssw. 3.1	396	977.6	-15.4		90 1.43	ssw.	388	10/10 Cl.St., wnw.



TABLE 2.—Free-air data from kite flights at Drezel Aerological Station, January, 1916—Continued.

January 15, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. lty.	Electric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
8:49	975.2	-17.4	100	nnw.	5.8	396	975.2	-17.4		100	1.32	nnw.	5.8	388	0	10/10 St., nw.
						500	961.6	-17.9				nnw.		490	0	Light snow.
8:53	975.2	-17.4	100	nnw.	5.8	695	937.0	-18.9	0.50			nnw.		681	0	
						750	930.0	-18.8				nnw.		735	0	
						1,000	899.4	-18.5				nw.		980	1,990	
9:01	975.3	-17.3	100	nnw.	4.9	1,042	894.3	-18.4	-0.14			nw.		1,022	2,340	
						1,250	869.6	-17.4				nw.		1,225	3,280	
						1,500	841.1	-16.2				wnw.		1,470	4,830	
9:27	975.6	-17.4	100	nnw.	5.4	1,616	828.8	-15.8	-0.47			wnw.		1,584	5,620	
						1,750	814.5	-13.1				wnw.		1,715	6,620	
						2,000	788.3	-8.2				wnw.		1,960	8,400	Altitude of St. base about 1,500 m.
9:37	975.7	-17.4	100	nnw.	5.4	2,213	767.1	-3.9	-1.99	64	2.82	wnw.		2,169	8,460	
						2,250	764.0	-3.9		63	2.78	wnw.		2,205	8,440	
9:40	975.8	-17.4	100	nnw.	5.4	2,390	750.5	-4.0	0.05	61	2.67	wnw.		2,342	8,380	
						2,500	740.2	-4.8		62	2.53	wnw.		2,450	8,310	Snow ended 10:20 a. m.
10:28	976.0	-16.9	100	nnw.	6.3	2,650	726.3	-6.4	0.75	64	2.28	wnw.		2,597	9,600	Clouds changing to A. St. & A. Cu., wnw.
						2,500	740.2	-6.0		65	2.39	wnw.		2,450	8,460	
						2,250	764.0	-4.1		68	2.94	wnw.		2,205	6,250	
10:47	976.0	-17.0	100	nnw.	7.2	2,236	765.4	-4.0	0.30	68	2.97	wnw.		2,191	6,210	Altitude of St. base about 1,400 m.
10:51	976.0	-17.0	100	nnw.	6.7	2,136	775.2	-3.7	-1.57	69	3.09	wnw.		2,083	5,970	
						2,000	788.9	-5.8		73	2.74	wnw.		1,960	5,740	
						1,750	815.3	-9.8		82	2.16	wnw.		1,715	5,000	
11:18	976.0	-17.0	100	nw.	7.2	1,741	815.2	-9.9	-20.64	82	2.15	wnw.		1,706	4,950	Cl. St. forming.
11:20	976.0	-17.0	100	nw.	7.2	1,710	818.7	-16.3	-0.55	85	1.24	wnw.		1,676	4,760	
						1,500	842.1	-17.4		87	1.15	wnw.		1,470	3,850	
11:24	976.0	-17.0	100	nw.	6.3	1,436	849.2	-17.8	0.02	88	1.12	wnw.		1,408	3,800	
						1,250	870.4	-17.8		89	1.13	nw.		1,225	3,670	Wire heavily coated with ice.
11:43	976.0	-16.6	100	nw.	7.2	1,033	896.0	-17.7	-1.27	90	1.15	nnw.		1,013	2,840	
						1,000	900.1	-18.1		91	1.12	nnw.		980	2,660	
11:49	976.0	-16.8	100	nw.	8.5	844	919.1	-20.1	0.78	98	1.00	nnw.		828	1,700	
						750	930.6	-19.4		98	1.07	nnw.		735	1,360	
						500	962.3	-17.4		100	1.32	nw.		490	420	
11:53	976.0	-16.6	100	nw.	8.5	396	976.0	-16.6		100	1.42	nw.	8.5	388	0	9/10 Cl. St., wnw.

January 16, 1916.

A. M.																	
10:19	983.4	-18.6	100	nw.	6.7	396	983.4	-18.6		100	1.18	nw.	6.7	388		7/10 Cl.St., wnw.	
						500	969.5	-19.2		99	1.10	nw.	5.2	490	170	Solar halo and parhelia.	
						750	938.0	-20.6		98	0.95	nw.	12.0	735	520		
10:22	983.4	-18.6	100	nw.	6.3	776	934.4	-20.7	0.55	98	0.94	nw.	12.4	761	540		
						1,000	906.5	-19.5		97	1.05	nw.	16.5	980	1,380		
10:34	983.4	-18.9	100	nw.	5.4	1,208	881.7	-18.3	-0.56	96	1.16	nw.	20.2	1,184	2,160	4/10 Cl.St., wnw.	
						1,250	876.3	-18.3		96	1.16	nw.	20.2	1,225	2,300		
						1,500	847.1	-18.6		93	1.10	nw.	20.3	1,470	3,460		
						1,750	819.1	-18.8		91	1.05	nw.	20.4	1,715	4,770		
						2,000	792.1	-19.1		88	0.99	nw.	20.5	1,960	5,810		
11:05	983.3	-18.8	98	nw.	7.6	2,145	777.2	-19.2	0.10	89	0.99	nw.	20.5	2,102	6,420		
						2,250	766.4	-19.2		89	0.99	nw.	21.4	2,205	6,920		
						2,500	741.2	-19.1		89	1.00	nw.	23.4	2,450	8,020		
						2,750	717.0	-18.9		89	1.01	wnw.	25.4	2,694	9,130		
						3,000	693.3	-18.8		89	1.02	wnw.	27.3	2,939	9,760		
11:33	982.9	-18.2	100	nw.	8.0	3,246	670.1	-18.7	-0.07	89	1.03	wnw.	29.2	3,180	(*)		
						3,000	692.7	-18.9		87	0.99	wnw.	26.9	2,939	9,260		
11:55	982.6	-17.9	94	nw.	7.2	2,803	710.9	-19.1	0.25	85	0.95	wnw.	24.9	2,746	8,600		
						2,750	716.0	-19.0		85	0.96	wnw.	24.6	2,694	8,400		
						2,500	740.0	-18.3		83	1.00	nw.	23.3	2,450	7,440		
P. M.																	
12:06	982.4	-17.5	91	nw.	8.5	2,487	741.5	-18.3	-0.17	83	1.00	nw.	23.2	2,437	7,390		
						2,250	765.5	-18.7		84	0.97	nw.	23.2	2,205	6,480		
						2,000	791.4	-19.1		85	0.95	nw.	23.2	1,960	5,430		
12:23	982.1	-17.3	89	nw.	7.6	1,949	797.0	-19.2	0.00	85	0.94	nw.	23.2	1,910	5,180		
						1,750	818.6	-19.2		87	0.97	nw.	21.2	1,715	4,190		
						1,500	846.6	-19.2		90	1.00	nw.	18.8	1,470	3,150		
12:45	981.7	-17.1	89	nw.	9.4	1,284	871.3	-19.2	-1.02	92	1.02	nw.	16.7	1,259	2,300		
						1,250	875.2	-19.6		92	0.98	nw.	16.7	1,225	2,120		
12:46	981.7	-17.1	89	nw.	9.4	1,137	888.6	-20.7	0.27	92	0.88	nw.	16.7	1,115	1,430		
						1,000	905.3	-20.0		93	0.93	nw.	13.9	980	700	4/10 Cl.St., wnw.	
12:54	981.5	-17.0	89	nw.	8.9	877	920.1	-20.0	0.67	93	0.96	nw.	11.3	860	0		
						750	936.5	-19.2		92	1.02	nw.	11.1	735	0		
						500	968.0	-17.5		90	1.17	nw.	10.8	490	0		
12:59	981.4	-16.8	89	nw.	10.7	396	981.4	-16.8		89	1.24	nw.	10.7	388	-----		

\* More than 10,000 volts.



## OBSERVATIONS AT DREXEL, JANUARY, 1916.

13

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.

January 17, 1916, series (No. 1).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	$10^6$ ergs.	volts.	
8:30.....	978.5	-18.8	100	ws.	6.7	396	978.5	-18.8	.....	100	1.15	ws.	6.7	388	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	964.9	-16.8	.....	84	1.17	w.	11.2	490	160	
8:35.....	978.4	-18.7	100	ws.	5.8	750	933.3	-12.0	.....	45	0.98	wnw.	21.9	735	510	
.....	.....	.....	.....	.....	.....	780	930.0	-11.4	-1.93	40	0.92	wnw.	23.2	765	660	
8:40.....	978.4	-18.7	100	ws.	5.8	1,000	902.7	-11.5	.....	41	0.93	wnw.	20.7	980	1,450	
.....	.....	.....	.....	.....	.....	1,250	874.4	-11.7	.....	43	0.96	nw.	17.8	1,225	2,760	
8:57.....	978.1	-17.1	100	ws.	5.4	1,491	847.4	-11.8	0.06	45	0.99	nw.	15.0	1,462	3,780	
.....	.....	.....	.....	.....	.....	1,500	846.0	-11.8	.....	45	0.99	nw.	15.0	1,470	3,800	
.....	.....	.....	.....	.....	.....	1,750	818.8	-12.8	.....	46	0.93	nw.	16.4	1,715	4,940	
9:15.....	978.1	-16.1	90	ws.	4.9	2,000	792.2	-13.8	.....	47	0.86	wnw.	17.8	1,960	5,720	
.....	.....	.....	.....	.....	.....	2,155	776.7	-14.4	0.39	47	0.82	wnw.	18.6	2,112	6,190	Few A.St., nw.
.....	.....	.....	.....	.....	.....	2,250	766.3	-14.4	.....	46	0.80	wnw.	19.7	2,205	6,500	
9:34.....	978.1	-14.8	83	w.	5.4	2,500	741.3	-14.4	.....	45	0.78	wnw.	22.5	2,450	8,000	
.....	.....	.....	.....	.....	.....	2,649	727.8	-14.4	0.00	44	0.77	wnw.	24.2	2,596	8,470	
9:46.....	978.1	-14.1	80	w.	8.9	2,750	717.5	-15.1	.....	44	0.72	wnw.	23.7	2,694	.....	
.....	.....	.....	.....	.....	.....	2,971	697.3	-16.8	0.74	45	0.63	wnw.	22.5	2,911	.....	
.....	.....	.....	.....	.....	.....	3,000	694.4	-16.7	.....	45	0.63	wnw.	23.0	2,939	.....	
9:56.....	978.1	-13.5	79	w.	8.0	3,250	672.1	-16.0	.....	45	0.68	wnw.	27.1	3,184	.....	
10:00.....	978.1	-13.1	80	w.	10.3	3,341	664.2	-15.8	-0.27	45	0.69	wnw.	28.6	3,273	.....	
.....	.....	.....	.....	.....	.....	3,445	654.9	-16.1	0.27	46	0.69	wnw.	28.1	3,375	.....	
10:17.....	978.2	-12.2	79	w.	8.9	3,250	672.1	-15.6	.....	46	0.72	wnw.	27.0	3,184	.....	4/10 A.St., nw.
.....	.....	.....	.....	.....	.....	3,160	679.7	-15.4	-0.43	46	0.73	wnw.	26.5	3,096	.....	Altitude of A.St. base about 2,200 m.
10:22.....	978.2	-12.0	79	wnw.	9.4	3,000	694.4	-16.1	.....	46	0.69	wnw.	22.3	2,939	.....	
.....	.....	.....	.....	.....	.....	2,951	698.9	-16.3	0.47	46	0.67	wnw.	21.0	2,891	.....	
.....	.....	.....	.....	.....	.....	2,750	717.5	-15.4	.....	53	0.84	nw.	21.0	2,694	.....	
10:33.....	978.3	-11.4	78	wnw.	8.0	2,676	724.6	-15.0	-1.54	56	0.92	nw.	21.0	2,622	.....	6/10 A.St., nw.
10:35.....	978.3	-11.3	78	wnw.	8.0	2,611	730.9	-16.0	0.34	58	0.87	nw.	21.5	2,558	.....	Altitude of A.St. base about 2,600 m.
.....	.....	.....	.....	.....	.....	2,500	741.3	-15.6	.....	61	0.95	nw.	21.3	2,450	6,360	
10:56.....	978.4	-11.0	82	nw.	7.2	2,250	766.3	-14.8	.....	67	1.13	nw.	20.8	2,205	5,570	
.....	.....	.....	.....	.....	.....	2,168	775.2	-14.5	0.70	69	1.19	nw.	20.6	2,125	5,300	4/10 A.St., nw.
11:07.....	978.3	-10.6	75	nw.	7.2	2,000	792.2	-13.3	.....	69	1.33	nw.	20.4	1,960	4,710	
.....	.....	.....	.....	.....	.....	1,752	818.7	-11.6	-1.13	68	1.53	nw.	20.1	1,717	3,840	
11:16.....	978.2	-10.3	69	nw.	7.6	1,500	846.0	-14.5	.....	72	1.25	nw.	19.1	1,470	3,300	
11:19.....	978.2	-10.5	69	nw.	8.0	1,443	852.6	-15.1	0.30	73	1.19	nw.	18.9	1,415	3,190	
.....	.....	.....	.....	.....	.....	1,275	871.7	-14.6	-0.53	74	1.25	nw.	16.8	1,250	2,860	1/10 A.St. nw.
11:24.....	978.1	-10.1	67	nw.	8.5	1,250	874.4	-14.7	.....	74	1.26	nw.	17.4	1,225	2,810	
.....	.....	.....	.....	.....	.....	1,199	880.4	-15.0	0.37	77	1.27	nw.	18.6	1,175	2,700	
11:33.....	978.0	-9.7	71	nw.	7.6	1,000	903.3	-14.3	.....	77	1.36	nw.	15.4	980	1,860	
.....	.....	.....	.....	.....	.....	871	919.2	-13.8	0.91	77	1.42	nw.	13.3	854	1,300	
.....	.....	.....	.....	.....	.....	750	933.8	-12.7	.....	76	1.55	nw.	12.0	735	810	
11:37.....	978.0	-9.5	72	nw.	8.0	500	964.5	-10.4	.....	73	1.83	nw.	9.2	490	240	
.....	.....	.....	.....	.....	.....	396	978.0	-9.5	.....	72	1.95	nw.	8.0	388	.....	Few A.St., nw.

January 17, 1916, series (No. 2).

P. M.																	
12:16.....	977.6	-7.6	63	nw.	9.4	396	977.6	-7.6	.....	63	2.02	nw.	9.4	388	.....	3/10 Cu., nw.	
						500	964.2	-8.8	.....	63	1.82	nw.	10.8	490	0		
12:24.....	977.5	-7.4	63	nw.	10.3	750	933.2	-11.7	.....	64	1.43	nw.	14.0	735	0		
						806	926.8	-12.4	1.17	64	1.34	nw.	14.8	790	0		
						1,000	903.0	-14.3	.....	67	1.18	nw.	15.6	980	720		
12:36.....	977.5	-7.3	63	nw.	9.8	1,250	873.8	-16.9	.....	71	0.98	nw.	16.7	1,225	1,630		
						1,264	872.4	-17.0	1.00	71	0.97	nw.	16.8	1,239	1,670		
12:38.....	977.4	-7.4	64	nw.	10.7	1,500	845.4	-15.2	.....	75	1.22	nw.	19.6	1,470	2,330		
						1,658	828.0	-14.0	-0.76	78	1.41	nw.	21.4	1,625	2,770	7/10 Cu. & Fr. Cu., nw.	
						1,750	818.0	-14.3	.....	77	1.36	nw.	21.3	1,715	2,960		
12:55.....	977.3	-7.0	66	nw.	8.5	2,000	791.2	-15.0	.....	75	1.24	nw.	20.7	1,960	3,420		
						2,050	786.3	-15.2	0.31	75	1.22	nw.	20.8	2,009	3,500		
1:06.....	977.3	-7.0	67	nw.	10.3	2,250	765.4	-16.8	.....	74	1.03	wnw.	20.4	2,205	3,970	Altitude of Cu. base about 1,400 m.	
						2,370	753.5	-17.8	0.81	73	0.93	wnw.	20.1	2,322	4,250		
1:12.....	977.2	-7.2	70	nw.	8.0	2,500	740.3	-17.0	.....	70	0.96	wnw.	21.2	2,450	4,840		
						2,598	730.8	-16.4	-0.61	68	0.99	wnw.	22.0	2,546	5,280		
1:24.....	977.2	-7.3	70	nw.	7.2	2,750	716.2	-16.3	.....	59	0.86	wnw.	25.2	2,694	.....	Light snow flurries 1:20 to 2:50 p. m.	
						2,833	708.4	-16.2	-0.18	54	0.80	wnw.	27.0	2,776	.....		
1:50.....	977.1	-7.2	70	nw.	6.3	2,750	716.2	-16.4	.....	52	0.75	wnw.	26.3	2,694	.....		
						2,500	740.3	-17.1	.....	45	0.61	wnw.	24.2	2,450	4,700		
2:08.....	977.0	-7.4	80	nw.	7.2	2,366	753.5	-17.5	0.65	42	0.55	wnw.	23.1	2,318	5,000		
						2,250	765.4	-16.7	.....	43	0.61	wnw.	22.4	2,205	4,480		
2:10.....	977.0	-7.4	80	nw.	7.2	2,000	791.2	-15.1	.....	46	0.75	nw.	20.8	1,960	3,440	9/10 St. Cu., nw.	
						1,855	806.3	-14.2	-2.73	47	0.84	nw.	19.9	1,818	3,040		
2:37.....	977.0	-7.1	75	nw.	5.4	1,750	818.0	-17.1	.....	48	0.65	nw.	18.8	1,715	2,760		
						1,701	822.9	-18.4	0.67	48	0.58	nw.	18.3	1,667	2,630		
2:35.....	977.0	-6.6	73	nw.	5.4	1,500	845.4	-17.0	.....	58	0.79	nw.	16.8	1,470	2,090		
						1,250	874.2	-15.4	0.96	70	1.11	nw.	15.0	1,225	1,400		
2:41.....	977.0	-6.3	70	nw.	5.4	1,000	903.0	-13.0	.....	73	1.45	nw.	13.5	980	800	7/10 St. Cu., nw.	
						864	919.6	-11.7	-1.15	75	1.67	nw.	13.2	847	0		
						750	933.2	-10.4	.....	74	1.86	nw.	11.3	735	0		
						500	964.2	-7.5	.....	71	2.29	nw.	7.1	490	0		
						396	977.0	-6.3	.....	70	2.51	nw.	5.4	388	.....		

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.

January 17, 1916, series (No. 3).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.	m. p. s.		10 <sup>6</sup> ergs.	volts.	
3:31	977.0	-6.3	64	nw.	8.5	396	977.0	-6.3	.....	64	2.30	nw.	8.5	388	.....	6/10 St. Cu., nw.
						500	964.0	-7.3	.....	65	2.14	nw.	9.5	490	0	
						750	933.0	-9.7	.....	67	1.79	nw.	12.0	735	0	
3:39	977.0	-6.3	64	nw.	7.6	808	926.4	-10.3	0.97	67	1.70	nw.	12.6	792	0	
						1,000	903.0	-12.0	.....	68	1.48	nw.	14.2	980	470	
3:47	977.0	-6.3	65	nw.	7.2	1,170	882.4	-13.5	0.86	69	1.30	nw.	15.7	1,156	900	4/10 St. Cu., nw.
						1,250	874.0	-14.0	.....	70	1.27	nw.	15.8	1,225	960	
						1,500	845.5	-15.9	.....	72	1.09	nw.	16.2	1,470	1,150	
4:00	977.0	-6.6	67	nw.	8.5	1,728	820.8	-17.5	0.73	74	0.96	nw.	16.5	1,694	1,530	
						1,750	818.2	-16.8	.....	74	1.03	nw.	15.0	1,715	1,870	
4:01	977.0	-6.6	68	nw.	8.5	1,881	804.0	-16.7	-0.52	74	1.04	nw.	14.8	1,844	1,830	
						2,000	791.3	-17.2	.....	74	0.99	nw.	16.1	1,960	2,070	
						2,250	765.3	-18.2	.....	73	0.89	nw.	18.9	2,205	2,560	
4:13	977.0	-6.7	71	nw.	6.7	2,408	749.5	-18.8	0.40	73	0.84	nw.	20.6	2,360	2,860	
						2,500	740.3	-17.8	.....	69	0.88	nw.	19.5	2,450	3,050	
4:14	977.0	-6.7	71	nw.	6.7	2,509	739.6	-17.7	-1.09	69	0.88	nw.	19.4	2,459	3,090	
4:23	977.0	-6.9	70	nw.	9.4	2,737	717.2	-17.3	-0.18	59	0.78	nw.	22.6	2,682	.....	
						2,750	716.2	-17.2	.....	59	0.79	nw.	22.6	2,694	.....	
4:28	977.0	-6.9	70	nw.	8.0	2,942	698.0	-16.0	-0.83	55	0.82	nw.	.....	2,882	.....	
4:32	977.0	-7.0	71	nw.	7.6	2,874	704.4	-16.7	0.51	51	0.72	nw.	.....	2,816	.....	
4:37	977.0	-7.1	73	nw.	6.3	2,756	715.6	-16.1	-0.35	48	0.72	nw.	.....	2,700	3,690	
						2,750	716.2	-16.1	.....	48	0.72	nw.	.....	2,694	3,680	
						2,500	740.3	-17.4	.....	45	0.59	nw.	.....	2,450	3,070	
4:47	977.0	-7.4	75	nw.	6.7	2,245	765.9	-17.9	0.18	44	0.55	nw.	.....	2,200	2,450	
						2,000	791.3	-17.4	.....	50	0.66	nw.	.....	1,960	1,970	
						1,750	818.2	-17.0	.....	56	0.77	nw.	.....	1,715	1,610	
5:00	977.0	-7.6	77	nw.	6.7	1,649	829.2	-16.8	0.62	59	0.82	nw.	14.1	1,616	1,440	
						1,500	845.5	-15.9	.....	63	0.96	nw.	14.6	1,470	1,160	
						1,250	874.0	-14.3	.....	69	1.21	nw.	15.5	1,225	690	
5:17	977.1	-7.9	80	nw.	7.2	1,149	885.9	-13.7	0.99	71	1.32	nw.	15.8	1,126	500	
						1,000	903.0	-12.2	.....	76	1.62	nw.	14.7	980	250	
5:29	977.1	-8.3	85	nw.	7.2	866	919.3	-11.1	0.55	81	1.90	nw.	13.8	849	0	2/10 St. Cu., nw.
						750	933.0	-10.5	.....	82	2.03	nw.	11.9	735	0	
						500	964.0	-9.1	.....	84	2.36	nw.	7.9	490	0	
5:35	977.2	-8.5	85	nw.	6.3	396	977.2	-8.5	.....	85	2.52	nw.	6.3	388	.....	

January 17, 1916, series (No. 4).

P. M.																	
6:54	977.3	-11.0	78	nw.	5.4	396	977.3	-11.0		78	1.85	nw.	5.4	388			Cloudless.
						500	963.7	-11.5		79	1.79	nw.	7.1	490	0		
						750	932.3	-12.6		81	1.66	nw.	11.3	735	0		
7:05	977.3	-11.5	80	nw.	4.0	768	930.9	-12.7	0.46	81	1.65	nw.	11.6	753	0		
						1,000	902.4	-14.2		78	1.39	nw.	13.1	980	0		
7:15	977.3	-11.5	78	nnw.	4.0	1,199	879.7	-15.4	0.63	75	1.19	nw.	14.3	1,175	0		
						1,250	873.1	-15.8		75	1.15	nw.	14.8	1,225	70		
						1,500	844.7	-17.5		76	0.99	nw.	17.0	1,470	380		
						1,750	817.0	-19.2		77	0.85	nw.	19.2	1,715	720		
7:20	977.3	-11.7	77	nnw.	5.4	1,758	816.3	-19.3	0.70	77	0.85	nw.	19.3	1,723	730		Few Cl., nw.
7:32	977.3	-11.6	77	nw.	4.9	1,866	804.6	-18.6	-0.65	79	0.93	nw.	24.2	1,829	890		
						2,000	790.3	-18.4		75	0.90	nw.	24.6	1,960	1,090		
						2,250	764.7	-17.9		68	0.86	nw.	25.3	2,205	1,730		
7:52	977.3	-12.1	79	nw.	4.5	2,439	745.2	-17.6	-0.18	63	0.81	nw.	25.9	2,390			
						2,250	764.7	-17.9		61	0.77	nw.	25.3	2,205			
						2,000	790.3	-18.4		58	0.70	nw.	24.4	1,960	1,460		
8:27	977.3	-13.6	89	wnw.	4.5	1,942	796.3	-18.5	-4.33	57	0.68	nw.	24.2	1,903	1,320		
8:30	977.3	-13.6	87	w.	4.0	1,912	799.7	-19.8	0.60	59	0.62	nw.	22.1	1,874	1,250		Few Cl., nw.
						1,750	817.0	-18.8		65	0.75	nw.	21.1	1,715	930		
						1,500	844.7	-17.3		73	0.97	nw.	19.5	1,470	480		
						1,250	873.1	-15.8		81	1.24	nw.	17.9	1,225	170		
8:55	977.3	-13.2	80	w.	4.5	1,168	883.2	-15.3	0.80	84	1.34	nw.	17.4	1,145	70		
						1,000	902.4	-14.0		85	1.54	nw.	17.2	980	0		
9:10	977.2	-13.6	83	w.	4.0	767	930.9	-12.1	0.41	86	1.85	nw.	17.0	753	0		
						750	932.3	-12.0		86	1.87	nw.	16.6	735	0		
9:16	977.1	-13.4	80	w.	3.6	547	957.9	-11.2	-1.39	83	1.98	wnw.	11.2	536	0		
						500	963.7	-11.9		83	1.82	wnw.	8.7	490	0		
9:19	977.1	-13.3	78	w.	3.6	396	977.1	-13.3		78	1.51	w.	3.6	388			Few Cl.St., nw.

January 17-18, 1916, series (No. 5).

P. M.																	
9:59	976.6	-14.6	90	ws.	4.5	396	976.6	-14.6		90	1.54	ws.	4.5	388			Few Cl.St., nw.
						500	963.2	-13.3		93	1.79	w.	10.9	490	0		Bright moonlight.
10:01	976.6	-14.6	90	ws.	4.5	677	941.2	-11.2	-1.21	98	2.28	wnw.	21.9	664	0		
						750	932.3	-11.4		97	2.22	nw.	20.4	735	0		
10:05	976.6	-14.5	88	ws.	4.0	780	928.7	-11.5	0.29	96	2.18	nw.	19.8	765	0		
						1,000	902.3	-13.3		95	1.83	nw.	19.4	980	0		
10:15	976.6	-14.2	89	ws.	4.5	1,135	886.3	-14.4	0.82	94	1.64	nw.	19.2	1,113	0		
						1,250	872.7	-15.4		95	1.51	nw.	19.5	1,225	160		
10:25	976.6	-13.7	87	w.	5.4	1,438	851.7	-16.9	0.83	96	1.32	nw.	20.0	1,410	425		
						1,500	844.9	-17.2		96	1.29	nw.	19.5	1,470	560		
10:35	976.6	-13.7	88	w.	5.4	1,750	816.3	-18.3		95	1.15	nw.	17.3	1,715	1,110		
						1,848	806.0	-18.8	0.46	95	1.09	nw.	16.5	1,811	1,310		
10:50	976.6	-13.4	83	w.	6.3	2,000	790.0	-17.3		98	1.17	nw.	19.9	1,960	1,640		
						2,196	769.6	-15.4	-0.98	79	1.26	nw.	24.2	2,152	2,080		
11:00	976.6	-13.2	84	w.	6.3	2,250	764.5	-15.1		77	1.26	nw.	29.1	2,205	2,200		
						2,443	745.1	-13.9	-0.50	68	1.24	nw.	30.5	2,394		Few Cl.St., nw.	
11:00	976.6	-13.2	84	w.	6.3	2,250	764.5	-14.6		58	0.99	nw.	24.5	2,205	2,540		
11:16	976.6	-12.8	81	w.	6.7	2,184	771.2	-14.9	-0.93	54	0.90	nw.	22.5	2,140	2,350		
						2,000	790.0	-16.6		51	0.72	nw.	20.6	1,960	1,870		
						1,750	816.3	-18.9		47	0.54	nw.	18.1	1,715	1,330		
11:40	976.6	-12.8	80	w.	7.6	1,744	817.7	-19.0	0.75	47	0.53	nw.	18.0	1,709	1,320		
						1,500	844.9	-17.2		57	0.76	nw.	18.3	1,470	810		
						1,250	872.7	-15.3		67	1.07	nw.	18.6	1,225	270		
11:50	976.6	-13.2	88	w.	5.4	1,167	882.8	-14.7	0.91	70	1.19	nw.	18.7	1,144	90		
						1,000	902.3	-13.2		77	1.50	nw.	18.7	980	0		



## OBSERVATIONS AT DREXEL, JANUARY, 1916.

15

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.

January 17-18, 1916 series (No. 5)—Continued.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
12:07.....	976.6	-13.3	90	w.	4.0	826	923.3	-11.6	0.41	84	1.89	nw.	18.7	810	0	
12:12.....	976.6	-13.5	92	w.	4.9	750	932.3	-11.3	-1.93	85	1.96	nw.	18.3	735	0	
12:16.....	976.6	-13.8	91	w.	4.9	560	963.2	-11.7		89	1.98	wnw.	17.3	551	0	
						396	976.6	-13.8		91	1.67	w.	4.9	388	.....	
Few Cl., nw.																

January 18, 1916, series (No. 6).

A. M.	Pressure.	Temperature.	Relative humidity.	Wind.	Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.	Wind.	Potential.	Remarks.
	mb.	° C.	%	Dir. Vel.	m.	mb.	° C.		Rel. Vap. pres.	Dir. Vel.	Grav. ity. Electric.	
1:05.....	976.6	-12.9	88	wnw. 4.0	396	976.6	-12.9		88 1.76	wnw. 4.0	388	Few Cl. & Cl.St., nw.
1:06.....	976.7	-12.9	88	wnw. 4.9	500	965.2	-12.3		94 1.98	wnw. 7.5	490	
1:12.....	976.7	-12.9	88	wnw. 5.8	609	949.9	-11.7	-0.56	100 2.23	nw. 11.3	597	
					750	932.5	-12.1		100 2.15	nw. 51.3	735	
1:26.....	976.9	-12.9	88	wnw. 5.8	784	928.3	-12.2	0.20	100 2.13	nw. 16.4	769	Lunar halo, 22°.
1:29.....	976.9	-12.8	88	wnw. 6.3	1,000	902.3	-13.8		100 1.84	nw. 16.7	980	
					1,250	873.0	-15.6		100 1.56	nw. 17.0	1,225	
					1,320	865.1	-16.1	0.73	100 1.49	nw. 17.1	1,294	
1:40.....	977.1	-12.5	84	nw. 6.7	1,428	852.9	-15.4	-0.65	100 1.59	nw. 14.8	1,400	9/10 Cl.St., nw.
					1,500	844.9	-15.5		99 1.55	nw. 15.0	1,470	
					1,750	817.3	-15.7		94 1.46	nw. 15.5	1,715	
					1,986	792.4	-16.0	0.11	90 1.35	nw. 16.0	1,946	
1:58.....	977.3	-12.8	84	nw. 5.8	2,000	790.9	-15.9		89 1.35	nw. 16.1	1,960	7/10 Cl. & C.St., nw.
2:11.....	977.3	-13.2	88	nw. 6.7	2,250	764.8	-15.0		80 1.32	nw. 18.2	2,205	
2:22.....	977.3	-13.4	92	nw. 5.8	2,500	740.3	-14.1		71 1.27	nw. 20.4	2,450	
2:37.....	977.3	-13.8	93	nw. 4.5	2,590	731.8	-13.8	-0.30	68 1.25	nw. 21.2	2,538	
2:44.....	977.3	-13.8	92	nw. 4.0	2,750	716.3	-14.9		65 1.09	nw. 22.5	2,694	Lunar halo ended.
					2,893	702.8	-15.8	0.66	63 0.96	nw. 23.6	2,835	
					2,750	716.3	-14.9		61 1.02	nw. 22.7	2,694	
					2,540	736.4	-13.5	-0.04	58 1.10	nw. 21.4	2,489	
2:56.....	977.3	-13.4	83	nw. 4.5	2,500	740.3	-13.5		57 1.08	nw. 21.0	2,450	8/10 Cl. & Cl.St., nw.
3:03.....	977.3	-13.4	83	nnw. 5.4	2,255	764.2	-13.0	-0.96	51 0.96	nw. 18.8	2,210	
					2,046	785.6	-15.6	0.13	51 0.80	nw. 16.5	2,005	
					2,000	790.9	-15.5		51 0.80	nw. 16.3	1,960	
3:21.....	977.5	-13.4	77	nnw. 5.8	1,750	817.3	-15.2		51 0.83	nw. 15.5	1,715	8/10 Cl. & Cl.St., nw.
					1,500	844.9	-14.9		50 0.84	nw. 14.6	1,470	
					1,411	854.6	-14.8	-0.31	50 0.84	nw. 14.3	1,383	
					1,250	873.0	-15.3		51 0.82	nnw. 14.7	1,225	
3:23.....	977.6	-13.6	78	nnw. 6.3	1,184	880.7	-15.5	-0.11	51 0.80	nnw. 14.8	1,161	7/10 Cl. & C.St., nw.
					1,000	902.3	-15.3		54 0.86	nnw. 14.2	980	
					750	932.8	-15.0		58 0.96	nnw. 13.4	735	
					657	944.4	-14.9	-0.50	60 1.00	nnw. 13.1	644	

January 18, 1916, series (No. 7).

A. M.	Pressure.	Temperature.	Relative humidity.	Wind.	Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.	Wind.	Potential.	Remarks.
	mb.	° C.	%	Dir. Vel.	m.	mb.	° C.		Rel. Vap. pres.	Dir. Vel.	Grav. ity. Electric.	
3:57.....	978.1	-14.1	77	nnw. 4.9	396	978.1	-14.1		77 1.38	nnw. 4.9	388	8/10 Cl. & Cl.St., nw.
4:10.....	978.2	-14.4	82	nw. 4.9	500	964.7	-14.7		78 1.33	nnw. 6.5	490	
4:11.....	978.2	-14.4	81	nw. 4.9	750	933.4	-16.0		82 1.23	nw. 10.4	735	
					942	909.9	-17.0	0.53	84 1.15	nw. 13.3	924	
4:30.....	978.4	-14.2	78	nw. 4.5	1,000	902.5	-16.8		85 1.18	nw. 13.7	980	6/10 Cl.St., nw.
4:35.....	978.5	-14.4	80	nw. 4.9	1,133	887.1	-16.4	-0.31	87 1.26	nw. 14.8	1,111	
					1,250	873.3	-16.2		85 1.26	nw. 14.2	1,225	
					1,500	844.9	-15.9		80 1.22	nw. 12.8	1,470	
4:46.....	978.6	-15.0	86	nw. 4.5	1,512	843.8	-15.9	-0.13	80 1.22	nw. 12.8	1,482	Lunar halo ended.
4:49.....	978.7	-15.0	86	nw. 4.5	1,750	817.2	-16.1		78 1.16	nw. 13.0	1,715	
					1,928	798.5	-16.2	0.07	76 1.12	nw. 13.2	1,890	
					2,000	790.7	-15.8		73 1.17	nw. 13.8	1,960	
5:08.....	978.8	-14.8	81	nnw. 2.7	2,250	765.0	-14.6		65 1.11	nw. 15.7	2,205	8/10 Cl.St., nw.
					2,295	760.5	-14.4	0.49	63 1.10	nw. 16.0	2,249	
					2,395	750.7	-14.4	0.00	61 1.06	nw. 14.8	2,347	
					2,500	740.0	-14.9		59 0.99	nw. 15.5	2,450	
5:18.....	978.7	-15.2	87	nnw. 4.0	2,750	715.8	-16.0		55 0.82	nw. 17.3	2,694	Lunar halo ended.
					2,899	702.4	-16.7	0.46	53 0.75	nw. 18.3	2,840	
					3,000	692.3	-17.1		52 0.70	nw. 18.2	2,939	
					3,250	669.2	-18.2		51 0.62	nw. 17.8	3,184	
5:35.....	978.6	-15.6	90	nnw. 3.1	3,453	652.1	-19.1	0.44	50 0.56	nw. 17.5	3,383	8/10 Cl.St., nw.
5:38.....	978.5	-15.5	90	nnw. 3.1	3,250	669.2	-18.2		49 0.60	nw. 16.6	3,184	
					3,000	692.3	-17.1		48 0.65	nw. 15.5	2,939	
					2,750	715.8	-16.0		47 0.70	nw. 14.5	2,694	
5:45.....	978.5	-15.5	90	nnw. 3.6	2,731	718.4	-15.9	-0.01	47 0.71	nw. 14.4	2,678	8/10 Cl.St., nw.
5:53.....	978.4	-15.7	90	nnw. 3.1	2,646	726.4	-16.0	0.47	47 0.70	nw. 16.1	2,593	
5:55.....	978.4	-15.8	90	nnw. 3.1	2,500	740.0	-15.3		47 0.75	nw. 15.1	2,450	
					2,250	765.0	-14.1		47 0.84	nw. 13.5	2,205	
6:04.....	978.4	-15.9	90	nw. 4.0	2,201	770.4	-13.9	-0.12	47 0.86	nw. 13.2	2,157	8/10 Cl.St., wnw.
					2,000	790.7	-14.1		45 0.81	nw. 13.0	1,960	
					1,959	795.2	-14.2	-1.40	45 0.80	nw. 13.0	1,920	
					1,865	805.2	-15.6	0.17	45 0.70	nw. 12.6	1,825	
6:14.....	978.5	-15.9	90	nw. 4.0	1,750	817.2	-15.4		45 0.72	nw. 11.4	1,715	8/10 Cl.St., wnw.
					1,512	843.8	-15.0		45 0.74	nw. 9.0	1,482	
					1,500	844.9	-15.0	0.02	45 0.74	nw. 9.0	1,470	
					1,250	873.3	-14.9		45 0.75	nw. 10.1	1,225	
6:23.....	978.6	-15.9	90	nw. 3.1	1,120	888.8	-14.9	-0.63	45 0.75	nw. 10.6	1,068	8/10 Cl.St., wnw.
					1,000	902.5	-15.7		46 0.71	nw. 10.2	980	
					754	933.1	-17.2	-0.39	48 0.64	nw. 9.3	729	
6:26.....	978.7	-15.8	90	nw. 3.1	500	964.9	-16.2		75 1.11	nw. 4.9	490	



TABLE 2.—Free-air data from kite flights at Drezel Aerological Station, January, 1916—Continued.

January 18, 1916, series (No. 8).

Surface.						At different heights above sea.											Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.		
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.		
7:07	979.0	-16.8	95	nnw.	2.7	396	979.0	-16.8		95	1.32	nnw.	2.7	388		5/10 Cl., wnw.; 2/10 Cl.St., wnw.	
7:10	979.1	-17.0	99	nnw.	2.7	500	969.4	-16.7	-0.10	97	1.37	nnw.	3.5	490	0		
						589	954.3	-16.6		99	1.41	nnw.	4.3	577	0		
						750	934.1	-15.8		95	1.45	nnw.	6.1	735	0		
						1,000	903.4	-14.6		89	1.52	wnw.	7.9	980	0		
8:07	979.5	-17.1	94	nnw.	2.2	1,250	874.3	-13.4		83	1.59	wnw.	9.7	1,225	330	Partial solar halo 7:55 to 8:20 a.	
						1,329	865.8	-13.0	-0.49	81	1.60	wnw.	10.3	1,303	520		
8:11	979.5	-17.2	94	nnw.	2.2	1,500	846.1	-13.7		79	1.47	wnw.	9.4	1,470	930		
						1,745	819.6	-14.6	0.38	77	1.32	wnw.	8.2	1,710	1,510	5/10 Cl., wnw.	
8:30	979.8	-18.5	94	nnw.	1.8	2,000	792.7	-14.1		72	1.29	wnw.	10.0	1,960	2,140		
						2,130	779.4	-13.9	-0.18	70	1.28	wnw.	11.0	2,087	2,480	3/10 Cl., wnw.	
						2,250	767.2	-14.2		67	1.19	wnw.	10.9	2,205	2,760		
						2,500	742.6	-14.8		62	1.04	wnw.	10.5	2,450	3,380		
9:30	980.2	-14.9	90	wnw.	2.2	2,580	735.2	-15.0	0.24	60	0.99	wnw.	10.4	2,528	3,700		
						2,750	718.7	-15.8		59	0.90	wnw.	11.8	2,694	3,900		
						3,000	695.3	-16.9		56	0.77	wnw.	14.6	2,939	4,170		
11:22	980.1	-13.1	92	wnw.	4.5	3,038	692.0	-17.1	0.46	56	0.76	wnw.	14.3	2,976	4,220		
						3,250	673.1	-17.1		56	0.76	wnw.	15.9	3,184	4,480		
11:34	980.0	-12.8	90	wnw.	4.5	3,498	651.2	-17.2	0.10	56	0.75	wnw.	17.7	3,427			
						3,250	673.1	-16.8		56	0.78	wnw.	15.7	3,184	4,500		
						3,000	695.3	-16.4		57	0.83	wnw.	13.8	2,939	3,990		
11:46	979.9	-12.4	86	wnw.	5.4	2,785	716.0	-16.0	0.48	57	0.86	wnw.	12.1	2,729	3,550		
						2,750	718.7	-15.8		57	0.87	wnw.	12.1	2,694	3,490		
						2,500	742.6	-14.6		57	0.97	wnw.	11.8	2,450	2,980		
						2,250	767.6	-13.4		56	1.07	wnw.	11.4	2,205	2,470		
11:54	979.8	-12.3	85	wnw.	4.0	2,000	792.3	-12.2		56	1.19	wnw.	11.1	1,960	1,970		
						1,929	801.2	-11.9	-0.06	56	1.23	wnw.	11.0	1,891	1,820		
P. M.																	
12:02	979.7	-12.1	85	wnw.	3.1	1,771	818.0	-12.0	-0.80	55	1.19	wnw.	7.0	1,738	1,520		
						1,750	819.8	-12.2		55	1.17	wnw.	7.2	1,715	1,480		
12:04	979.6	-12.1	85	wnw.	3.1	1,646	831.4	-13.0	0.23	55	1.09	wnw.	7.9	1,613	1,300	1/10 Cl., wnw.	
						1,500	846.9	-12.7		55	1.12	w.	8.3	1,470	1,220		
						1,250	875.2	-12.1		54	1.16	wsnw.	9.0	1,225	1,070		
12:20	979.4	-11.5	82	wsnw.	3.6	1,125	890.0	-11.8	-0.22	54	1.19	wsnw.	9.4	1,103	1,000	Few Cl., wnw.	
						1,000	903.9	-12.1		54	1.16	wsnw.	7.6	980	800		
12:27	979.3	-11.4	82	wsnw.	4.0	856	921.9	-12.4	-5.00	54	1.13	w.	5.5	839	560		
12:28	979.3	-11.4	82	wsnw.	4.0	826	925.5	-13.9	0.05	55	1.01	w.	5.5	810	510		
						750	934.1	-13.9		58	1.06	w.	5.1	735	380		
12:36	979.2	-11.3	82	wsnw.	4.0	608	952.5	-13.8	1.18	65	1.20	wsnw.	4.3	506	160		
						500	969.4	-12.5		74	1.53	wsnw.	4.6	490	0		
12:39	979.1	-11.3	82	wsnw.	4.9	396	979.1	-11.3		82	1.89	wsnw.	4.9	388			

January 18, 1916, series (No. 9).

1:23	P. M.	978.6	- 9.6	84	sw.	3.6	396	978.6	- 9.6	84	2.26	sw.	3.6	388	Cloudless.
							500	965.2	-10.5	82	2.03	sw.	4.5	490	
1:52		978.2	- 9.0	78	sw.	5.4	725	937.3	-12.5	0.88	77	1.59	sw.	6.3	270
							750	934.0	-11.9		77	1.69	sw.	6.2	320
3:24		977.7	- 6.5	76	sw.	4.9	798	928.3	-10.8	-2.33	77	1.86	sw.	6.0	782
							1,000	903.7	-11.1		79	1.86	sw.	8.8	980
4:16		977.4	- 6.8	82	sw.	4.9	1,168	884.3	-11.4	0.16	80	1.83	sw.	11.0	1,145
							1,250	874.7	-10.3		78	1.97	sw.	12.3	1,225
4:22		977.3	- 7.0	84	sw.	5.4	1,367	861.8	- 8.6	-1.41	74	2.18	w.	14.1	1,340
							1,500	846.7	- 9.1		74	2.08	w.	13.9	1,470
4:37		977.2	- 7.3	81	sw.	4.5	1,740	821.0	- 9.9	0.35	73	1.91	nw.	13.6	1,705
							1,750	819.6	- 9.9		73	1.91	nw.	13.6	1,715
4:42		976.9	- 7.7	83	sw.	5.4	2,000	793.3	-10.1		65	1.67	nw.	13.1	1,960
							2,236	769.6	-10.3	0.08	58	1.47	nw.	12.6	2,191
							2,250	768.0	-10.4		58	1.46	nw.	12.5	2,205
							2,500	743.4	-11.4		49	1.12	nw.	10.9	2,450
5:22		976.6	- 8.5	87	sw.	5.4	2,665	727.4	-12.1	0.42	43	0.92	nw.	9.8	2,611
							2,750	719.9	-12.5		42	0.87	nw.	10.5	2,694
							3,000	696.7	-13.9		39	0.71	wnw.	12.6	2,939
5:45		976.6	- 8.9	91	sw.	7.6	3,047	692.2	-14.1	0.52	38	0.68	wnw.	13.0	2,985
							3,000	696.7	-13.9		38	0.70	wnw.	13.0	2,939
							2,750	719.9	-12.6		38	0.80	w.	13.0	2,694
6:02		976.6	- 9.2	94	sw.	8.0	2,509	737.2	-11.6	0.33	38	0.86	w.	13.0	2,517
							2,500	743.4	-11.4		38	0.87	w.	12.4	2,450
6:15		976.6	- 9.1	94	sw.	8.5	2,270	766.3	-10.6	-0.15	38	0.93	w.	10.6	2,225
							2,250	768.0	-10.6		38	0.93	w.	10.7	2,205
							2,000	793.3	-10.2		44	1.12	w.	12.2	1,960
6:23		976.6	- 9.0	94	ssw.	8.5	1,802	814.5	- 9.9	0.30	49	1.28	w.	13.3	1,766
							1,750	819.6	- 9.7		50	1.34	w.	13.1	1,715
							1,500	846.7	- 9.0		57	1.62	wsnw.	12.2	1,470
							1,250	874.9	- 8.2		65	1.98	sw.	11.2	1,225
6:42		976.6	- 8.8	94	sw.	8.5	1,242	875.6	- 8.2	-0.65	65	1.98	sw.	11.2	1,218
							1,000	902.9	- 9.8		70	1.85	ssw.	12.1	980
6:44		976.6	- 8.7	94	sw.	8.5	982	905.3	- 9.9	0.80	70	1.83	ssw.	12.2	963
6:49		976.6	- 8.7	94	sw.	8.5	819	924.7	- 8.6	-0.02	73	2.15	ssw.	13.0	803
							780	932.8	- 8.6		76	2.23	ssw.	12.2	735
							800	963.4	- 8.7		89	2.69	sw.	9.2	490
6:54		976.6	- 8.7	94	sw.	8.0	396	976.6	- 8.7		94	2.74	sw.	8.0	388
															3/10 Cl., wnw.

## OBSERVATIONS AT DREXEL, JANUARY, 1916.

17

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.

January 19, 1916 (No. 1).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Altitude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%	s.	m. p. s.	m.	mb.	° C.		%	mb.	s.	m. p. s.	$10^6$ ergs.	volts.	
8:46.....	969.3	-6.6	98	s.	8.9	396	969.3	-6.6		98	3.43	s.	8.9	388		10/10 St., ssw.
						500	956.3	-7.2		99	3.29	s.	12.2	490	0	Snowing.
8:50.....	969.3	-6.6	98	s.	8.5	740	927.4	-8.6	0.58	100	2.94	ssw.	19.8	726	0	
						750	926.1	-8.6		100	2.94	ssw.	19.9	735	0	
8:55.....	969.3	-6.6	100	ssw.	9.8	1,000	896.6	-8.6		100	2.94	ssw.	21.1	980	0	
						1,011	895.4	-8.6	0.00	100	2.94	ssw.	21.2	991	0	
9:04.....	969.2	-6.6	100	ssw.	9.8	1,250	868.0	-9.1		100	2.94	ssw.	21.5	1,225	615	
9:08.....	969.2	-6.6	100	ssw.	8.0	1,367	855.3	-9.4	0.22	100	2.74	ssw.	21.6	1,340	615	Altitude of St. base about 750 m.
						1,463	844.8	-8.7	-0.73	100	2.91	ssw.	21.0	1,434	615	
9:13.....	969.1	-6.7	99	ssw.	8.0	1,500	840.4	-8.7		100	2.91	ssw.	21.2	1,470	630	
						1,667	822.8	-8.7	0.00	100	2.91	ssw.	22.0	1,634	1,040	Snow ended 9:14 a. m.
						1,750	814.0	-8.1		100	3.07	ssw.	20.2	1,715	1,340	
9:15.....	969.1	-6.7	98	ssw.	8.5	1,795	809.3	-7.8	-0.70	100	3.15	ssw.	19.2	1,739	1,500	Head kite broke away.

January 19, 1916 (No. 2).

P. M.	Pressure.	Temperature.	Relative humidity.	Wind.	Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.	Wind.	Potential.	Remarks.
	mb.	°C.	%	s.	m.	mb.	°C.		%	s.	10 <sup>6</sup> ergs.	
4:27.	960.8	-2.8	87	s.	10.3	396	960.8	-2.8	87	4.21	388	10/10 St., s.
4:30.	960.8	-2.8	87	ssw.	9.8	500	948.0	-3.8	88	3.91	490	
						722	921.7	-5.8	91	3.41	708	
						750	918.2	-5.9	91	3.38	735	Altitude of St. base about 900 m.
4:36.	960.7	-2.8	87	s.	13.4	1,000	889.3	-7.2	91	3.02	980	
						1,112	876.8	-7.8	91	2.87	1,090	
4:41.	960.7	-2.9	87	s.	11.6	1,250	861.3	-8.6	92	2.70	1,225	500
						1,376	847.5	-9.4	92	2.52	1,349	810
4:55.	960.5	-2.9	89	s.	9.4	1,250	861.3	-8.7	92	2.68	1,225	810
						1,000	889.3	-7.3	92	3.03	980	290
5:08.	960.5	-2.8	80	ssw.	9.8	885	902.6	-6.7	92	3.19	888	0
						750	918.2	-5.8	92	3.45	735	0
5:14.	960.5	-2.8	89	ssw.	9.4	614	934.2	-4.8	92	3.75	602	0
						500	948.0	-3.8	90	4.00	490	0
						396	960.5	-2.8	89	4.31	388	10/10 St., s.

January 20, 1916.

A. M.	Pressure.	Temperature.	Relative humidity.	Wind.	Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.	Wind.	Potential.	Remarks.
	mb.	°C.	%	s.	m.	mb.	°C.		%	s.	10 <sup>6</sup> ergs.	
9:11.	963.0	-0.6	94	sw.	10.3	396	963.0	-0.6	94	5.46	388	3/10 Cl., wsw.; 2/10 A.St., wsw.;
9:12.	963.1	-0.6	94	ssw.	10.3	500	950.9	2.7	87	6.46	490	2/10 A.Cu., wsw.
9:20.	963.2	-0.5	94	sw.	10.7	631	935.6	6.8	79	7.81	619	
9:29.	963.4	0.0	92	sw.	10.3	750	922.4	6.7	74	7.26	735	
						804	916.2	6.6	72	7.02	785	Few Cl., wsw.; 2/10 A.St., wsw.;
						1,000	894.4	5.0	71	6.19	980	6/10 A.Cu., wsw.
						1,152	878.1	3.7	71	5.65	1,129	
						1,250	867.8	3.4	71	5.54	1,225	
						1,500	842.3	2.7	70	5.19	1,470	
						1,750	817.0	2.0	69	4.87	1,715	
9:55.	964.0	0.7	92	ssw.	8.5	2,000	791.8	1.3	68	4.56	1,900	
						2,248	767.2	0.6	67	4.27	2,303	3/10 Cl. & Cl.Cu., wsw.; 3/10 A.St.,
						2,500	743.8	-0.8	68	3.88	2,450	wsw.; 3/10 A.Cu., wsw.
						2,750	720.9	-2.1	70	3.59	2,694	
						3,000	698.4	-3.5	71	3.24	2,939	
10:33.	964.3	1.2	84	sw.	6.7	3,140	684.1	-4.3	72	3.07	3,076	
						3,000	698.4	-3.7	69	3.09	2,939	
						2,750	720.9	-2.6	63	3.10	2,694	
11:05.	964.5	2.1	84	sw.	7.2	2,693	726.1	-2.4	62	3.10	2,639	
						2,500	743.8	-1.4	62	3.37	2,450	
						2,250	767.1	-0.1	62	3.76	2,205	
						2,000	791.8	1.2	62	4.13	1,900	
						1,750	817.0	2.5	62	4.53	1,715	
11:35.	964.5	2.7	82	sw.	7.2	1,671	824.9	2.9	62	4.67	1,638	6/10 Cl., wsw.; 4/10 A.St., wsw.
						1,500	842.3	3.5	62	4.87	1,470	
						1,250	867.8	4.5	62	5.22	1,225	
						1,000	894.4	5.5	62	5.60	980	
						750	923.0	6.4	62	5.96	735	
11:55.	964.5	3.1	81	sw.	6.7	730	925.8	6.5	62	6.00	716	
NOON.	964.5	2.9	81	sw.	7.2	596	941.1	0.8	64	6.32	584	
						500	952.0	4.8	74	6.36	490	
12:04.	964.5	2.7	83	sw.	7.2	396	964.5	2.7	83	6.16	388	2/10 Cl.St., wsw.; 8/10 A.St., wsw.

January 21, 1916 (No. 1).

A. M.	Pressure.	Temperature.	Relative humidity.	Wind.	Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.	Wind.	Potential.	Remarks.
	mb.	°C.	%	s.	m.	mb.	°C.		%	s.	10 <sup>6</sup> ergs.	
10:54.	956.4	1.2	100	sw.	6.3	396	956.4	1.2	100	6.66	388	Dense fog.
10:59.	956.4	1.2	100	sw.	6.3	500	944.2	0.6	100	6.38	490	
						623	929.8	0.0	100	6.11	611	
						750	915.2	0.1	100	6.15	735	
11:18.	956.4	1.3	100	sw.	6.3	1,000	887.0	0.3	99	6.18	980	
						1,084	877.8	0.4	99	6.23	1,063	
11:19.	956.4	1.3	100	sw.	6.3	1,250	859.8	1.9	97	6.80	1,225	
						1,334	851.1	2.7	96	7.12	1,308	
11:30.	956.4	1.3	100	wsw.	5.8	1,500	833.3	2.0	95	6.71	1,470	
						1,603	814.0	1.1	92	6.95	1,669	Fog changed to light.
						1,750	806.1	0.8	92	5.95	1,715	
						2,000	783.5	-0.4	89	5.26	2,120	
						2,250	759.6	-1.7	86	4.56	2,303	
						2,500	736.2	-2.9	82	3.94	2,450	
						2,750	713.2	-4.2	79	3.40	2,694	
11:54.	956.4	1.5	100	w.	6.3	2,873	701.8	-4.8	77	3.14	2,815	Clock cylinder became loose.

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.

January 21, 1916 (No. 2).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
1:54	957.6	3.5	89	w.	7.2	396	957.6	3.5		89	6.99	w.	7.2	388		10/10 St.Cu., w.
						500	945.3	2.6		89	6.56	w.	8.6	490	0	
						750	916.3	0.5		90	5.70	w.	11.8	735	0	
2:02	957.7	3.6	88	w.	7.6	795	911.5	0.1	0.85	90	5.54	wsww.	12.4	779	0	Altitude of St.Cu. base about 800 m.
						1,000	888.1	-0.8		90	5.14	w.	12.9	980	0	
2:10	957.8	3.6	89	w.	6.3	1,236	862.8	-1.8	0.43	91	4.79	w.	13.5	1,212	0	
						1,250	861.0	-1.9		91	4.75	w.	13.4	1,225	0	
2:22	957.8	3.9	91	w.	4.9	1,483	836.3	-2.9	0.45	88	4.22	w.	10.9	1,454	110	
						1,600	834.3	-2.8		87	4.21	w.	11.0	1,470	120	
2:25	957.9	4.0	91	w.	4.9	1,714	812.5	-1.8	-0.48	86	4.52	w.	13.0	1,680	250	Clouds decreasing.
						1,750	808.9	-1.9		86	4.49	w.	13.2	1,715	260	
						2,000	783.5	-2.7		85	4.15	w.	14.8	1,960	440	
2:28	957.9	4.1	89	w.	4.9	2,081	775.7	-3.0	0.33	85	4.04	w.	15.3	2,039	490	
2:39	958.0	4.4	87	w.	5.8	2,164	768.0	-1.7	-1.57	82	4.35	w.	18.3	2,121	510	
						2,250	759.2	-2.4		82	4.10	w.	18.2	2,205	510	
						2,500	735.5	-4.3		83	3.54	w.	18.1	2,450	570	
2:57	958.1	4.7	84	w.	6.3	2,738	714.3	-6.1	0.77	83	3.03	w.	18.0	2,683	800	4/10 St.Cu., w.
						2,750	713.0	-6.2		83	3.00	w.	18.1	2,694	910	
						3,000	690.8	-7.5		82	2.65	w.	18.3	2,939	980	
						3,250	669.4	-8.8		81	2.34	w.	18.5	3,184	1,060	
3:19	958.3	4.8	86	w.	5.8	3,449	652.5	-9.8	0.63	80	2.11	w.	18.6	3,379		
						3,250	669.4	-8.3		74	2.23	w.	18.9	3,184		
						3,000	691.1	-6.5		67	2.37	w.	19.2	2,939	620	
3:40	958.6	4.8	85	w.	5.4	2,816	707.9	-5.1	0.51	61	2.43	w.	19.4	2,759	800	
						2,750	713.6	-4.8		60	2.45	w.	19.3	2,694	770	
						2,500	736.7	-3.5		56	2.55	w.	18.7	2,450	630	
3:51	958.7	4.9	84	w.	6.7	2,461	740.8	-3.3	0.15	55	2.55	w.	18.6	2,412	610	
						2,250	760.5	-3.0		60	2.85	w.	17.3	2,205	490	
						2,000	785.0	-2.6		66	3.25	w.	15.8	1,960	280	
4:06	959.0	5.0	88	w.	5.4	1,750	810.3	-2.2		71	3.61	w.	14.4	1,715	70	6/10 St.Cu., w.
						1,744	811.2	-2.2	0.59	71	3.61	w.	14.3	1,709	70	
4:15	959.2	5.0	88	w.	4.5	1,500	835.7	-0.8		77	4.40	w.	12.9	1,570	0	
						1,351	852.2	0.1	0.00	80	4.92	w.	12.0	1,324	0	
4:22	959.4	5.0	86	w.	5.4	1,250	862.3	0.1		81	4.98	w.	12.2	1,225	0	
						1,178	870.9	0.1	0.49	81	4.98	w.	12.3	1,155	0	2/10 St.Cu., w.
4:28	959.5	4.8	85	w.	5.4	1,000	890.0	1.0		83	5.45	w.	12.3	980	0	
						812	911.5	1.9	0.67	85	5.96	w.	12.2	796	0	
						750	918.3	2.3		85	6.13	w.	11.2	735	0	
						500	947.8	4.0		86	6.99	w.	7.1	490	0	
4:35	960.0	4.7	86	w.	5.4	396	960.0	4.7		86	7.34	w.	5.4	388		Few St.Cu., w.

January 22, 1916.

A. M.														
8:37	975.9	-2.3	81	w.	2.2	396	975.9	-2.3	81	4.08	w.	2.2	388	Cloudless.
						500	963.3	-0.5	73	4.28	w.	3.6	490	
						750	935.1	3.9	53	4.28	wsww.	6.9	735	
10:16	977.5	0.2	72	w.	2.2	778	932.3	4.4	51	4.27	wsww.	7.3	763	Few Cl., nw.
						1,000	907.1	2.6	50	3.68	wsww.	7.5	980	
10:45	977.9	1.4	66	nw.	2.2	1,176	888.0	1.2	50	3.33	wsww.	7.7	1,153	1/10 Cl., nw.
						1,250	879.8	0.7	50	3.22	wsww.	7.9	1,225	
						1,500	852.8	-1.0	49	2.75	wsww.	8.5	1,470	
11:27	977.9	2.2	61	w.	2.7	1,752	826.2	-2.7	49	2.39	wsww.	9.1	1,717	7/10 Cl., nw.
						2,000	800.3	-4.6	49	2.03	wsww.	10.8	1,960	
						2,250	775.2	-6.5	49	1.73	wsww.	12.5	2,205	
11:38	977.8	2.3	61	wnw.	2.2	2,277	772.8	-6.7	49	1.79	wsww.	12.7	2,231	
						2,500	751.1	-6.0	49	1.80	w.	17.2	2,450	
11:50	977.8	2.6	59	wnw.	1.8	2,533	748.2	-5.9	49	1.82	w.	18.1	2,482	
P. M.														
12:05	977.7	2.8	60	w.	1.8	2,755	727.1	-5.8	49	1.81	wnw.	23.6	2,699	1,500
						3,000	705.1	-6.8	49	1.69	wnw.	23.5	2,939	1,910
						3,250	683.2	-7.9	50	1.56	wnw.	23.4	3,184	2,110
						3,500	661.8	-8.9	50	1.43	wnw.	23.3	3,429	2,300
						3,750	640.8	-9.9	50	1.31	wnw.	23.2	3,673	2,490
						4,000	619.8	-10.9	50	1.20	wnw.	23.1	3,918	2,690
						4,250	599.3	-12.0	51	1.11	wnw.	23.0	4,162	
12:32	977.5	3.2	55	w.	1.3	4,325	593.6	-12.2	51	1.09	wnw.	23.0	4,235	Head kite broke away.

January 21, 1916.

A. M.																
9:49	970.6	3.7	66	SSW.	11.6	396	970.6	3.7		66	5.25	SSW.	11.6	388		7/10 Cl.St., w.; 3/10 A.St., w.
						500	958.2	3.6		66	5.22	SSW.	14.6	490	0	
9:54	970.6	3.8	66	SSW.	10.7	738	930.6	3.5	0.06	66	5.18	SW.	21.4	724	0	
						750	929.0	3.6		65	5.14	SW.	21.4	735	0	
						1,000	901.1	6.9		56	5.57	SW.	22.2	980	0	
10:07	970.6	4.1	66	SSW.	10.7	1,093	891.1	8.1	-1.30	52	5.62	SW.	22.5	1,072	0	
						1,250	874.1	8.1		51	5.51	SW.	20.2	1,225	210	
						1,500	848.0	8.1		50	5.40	SW.	16.4	1,470	570	
10:18	970.6	4.2	65	SSW.	10.7	1,615	836.6	8.1	0.00	49	5.29	SW.	14.7	1,583	730	
						1,750	822.8	8.3		48	5.26	SW.	11.7	1,715	730	
10:38	970.6	4.4	66	SSW.	10.7	1,839	814.2	8.5	-0.18	47	5.22	SW.	9.7	1,802	730	
						2,000	798.3	8.0		46	4.94	SW.	10.0	1,960		
10:44	970.6	4.5	66	SSW.	13.9	2,081	790.5	7.8	0.24	45	4.76	SW.	10.1	2,039		
						2,000	798.3	8.0		45	4.83	SW.	10.4	1,960		
						1,750	822.8	8.5		45	5.00	SW.	11.1	1,715		
11:00	970.6	4.8	66	SSW.	10.7	1,535	844.6	8.9	-0.32	45	5.13	SW.	11.8	1,504	460	
						1,500	848.0	8.8		45	5.10	SW.	12.4	1,470	440	
						1,250	874.1	8.0		46	4.94	SW.	16.5	1,225	270	
11:07	970.5	4.8	66	SSW.	10.7	1,102	889.8	7.5	-1.90	47	4.87	SW.	18.9	1,080	170	
						1,000	901.1	6.1		52	4.90	SW.	18.2	980	120	
11:20	970.3	5.0	64	SSW.	10.3	771	926.5	3.1	0.53	63	4.81	SW.	16.5	756	0	
						750	929.0	3.2		63	4.84	SW.	16.1	735	0	
						500	957.8	4.5		64	5.39	SSW.	11.0	490	0	
11:25	970.2	5.1	64	SSW.	8.9	396	970.2	5.1		64	5.63	SSW.	8.9	388		4/10 Cl., w.; 4/10 Cl.St., w.; 2/10 A.St., w.



## OBSERVATIONS AT DREXEL, JANUARY, 1916.

19

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.

January 24, 1916 (No. 1).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Altitude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%	s.	m. p. s.	m.	mb.	° C.		%	mb.	s.	m. p. s.	10 <sup>6</sup> ergs.	volts.	
8:48	962.5	1.4	93	s.	4.9	396	962.5	1.4		93	6.29	s.	4.9	388		7/10 A.St., wnw.; 3/10 St.Cu., wnw.
						500	949.8	3.0		90	6.82	sw.	5.9	490	0	
8:55	962.5	1.8	93	s.	5.8	724	924.5	6.6	-1.59	82	8.00	sw.	8.2	710	0	
						750	921.2	7.0		81	8.12	sw.	8.0	735	200	3/10 A.St., w.; 7/10 St.Cu., w.; at 10:00 a. m.
						1,000	893.8	11.1		72	9.51	sw.	6.0	990	170	
P. M.																
12:02	962.1	5.5	84	s.	5.4	1,100	883.5	12.7	-1.62	69	10.14	sw.	5.1	1,078	260	
						1,250	867.8	13.3		68	10.38	sw.	4.3	1,225		
12:10	962.1	5.8	83	sw.	4.0	1,387	854.0	13.8	-0.38	68	10.73	sw.	3.5	1,360		
12:22	962.0	6.0	81	sw.	7.2	1,463	846.1	13.5	0.28	67	10.36	sw.	3.1	1,434		
						1,250	867.8	13.9		66	10.48	sw.	4.6	1,225		
12:35	961.9	6.0	81	sw.	7.6	1,173	875.4	14.0	-2.00	66	10.55	sw.	5.2	1,150		
						1,000	893.8	10.5		66	8.38	sw.	5.2	990		
12:41	961.9	6.4	80	sw.	8.5	818	913.5	6.9	-2.00	65	6.47	sw.	5.2	802		
						750	920.9	6.5		72	6.50	sw.	4.9	735		
12:50	961.9	6.4	80	sw.	7.2	658	931.4	3.7	1.11	83	6.61	sw.	4.5	645	0	
						500	949.2	5.4		81	7.27	sw.	5.8	490	0	
12:53	961.8	6.6	79	sw.	6.7	396	961.8	6.6		79	7.70	sw.	6.7	388		1/10 A.St., w.; 9/10 St.Cu., w.

January 24, 1916 (No. 2).

P. M.																
1:30	961.6	8.0	77	sw.	5.8	396	961.6	8.0	77	8.26	sw.	5.8	388	0	1/10 A.St. w.; 9/10 St.Cu., w.	
						500	949.2	6.8	79	7.81	sw.	5.6	490	0		
2:16	961.3	8.0	86	ssw.	5.8	747	921.0	4.0	82	6.67	ssw.	5.1	732	0		
2:55	961.0	8.1	77	s.	2.7	1,004	892.4	11.2	72	9.58	sw.	6.6	984	0	5/10 Cl.St., wnw.; 5/10 St.Cu	
						1,250	866.7	12.3	68	9.73	sw.	6.6	1,225	0	wnw.	
3:10	961.2	8.1	76	s.	3.1	1,445	846.9	13.1	64	9.65	sw.	6.6	1,416	0		
3:46	961.8	8.0	77	ssw.	0.9	1,499	841.6	10.5	63	8.00	sw.	5.8	1,469	0		
3:53	962.0	7.9	78	ssw.	0.9	1,278	864.2	8.5	63	6.99	ssw.	7.9	1,253	0		
						1,250	867.3	8.3	63	6.90	ssw.	7.7	1,225	0		
						1,000	894.2	6.5	64	6.20	ssw.	5.7	990	0		
4:01	962.1	7.9	78	ssw.	0.9	852	910.1	5.5	65	5.87	ssw.	4.5	835	0		
						750	921.4	6.0	68	6.36	ssw.	3.7	735	0		
						500	950.2	7.3	77	7.88	ssw.	1.7	490	0		
4:05	962.2	7.8	80	ssw.	0.9	396	962.2	7.8	80	8.46	ssw.	0.9	388	0	10/10 St.Cu., w.	

January 25, 1916 (No. 1).

A. M.															
10:09	975.0	-15.3	100	nnw.	6.7	396	975.0	-15.3	100	1.60	nnw.	6.7	388		10/10 St., nnw.
						500	951.0	-16.2	100	1.48	nnw.	7.8	490	0	Snowing.
						750	929.8	-18.5	100	1.19	nnw.	10.6	735	0	Altitude of St. base about 750 m
10:17	975.1	-15.4	100	nnw.	7.2	796	924.4	-18.9	100	1.14	nnw.	11.1	790	0	
11:12	975.3	-14.7	97	n.	5.8	973	903.1	-11.9	100	2.19	nnw.		954	0	
11:22	975.3	-14.8	92	n.	7.6	798	924.4	-18.4	100	1.20	nnw.		782	0	
						750	929.8	-17.9	100	1.26	nnw.		735	0	
						500	961.2	-15.4	100	1.59	nnw.		490	0	Considerable ice on wire.
11:35	975.3	-14.3	100	nnw.	6.7	396	975.3	-14.3	100	1.76	nnw.	6.7	388		

January 25, 1916 (No. 2).

P. M.																
1:17	974.2	-13.4	96	n.	6.7	396	974.2	-13.7	96	1.79	n.	6.7	388		10/10 St., nnw.	
						500	960.2	-14.8	98	1.65	n.	7.5	490		Snow flurries.	
1:18	974.2	-13.8	97	n.	6.7	629	944.6	-16.1	100	1.49	nnw.	8.4	617	1,120	Altitude of St. base about 700 m	
						750	928.7	-16.1	100	1.49	nnw.		735	620		
1:27	974.0	-13.7	97	n.	7.2	929	907.6	-16.0	100	1.50	nnw.		911	1,100		
						1,000	899.0	-12.0	100	2.17	nne.		980			
1:50	973.7	-13.1	98	n.	5.8	1,006	898.2	-11.7	100	2.23	nne.		966			
						1,000	899.0	-12.1	100	2.15	nne.		980			
2:01	973.6	-13.2	96	n.	4.9	847	917.2	-16.1	100	1.49	n.		830			
						750	928.7	-16.1	100	1.49	nnw.		735		Wire coated with ice.	
2:09	973.6	-13.0	96	n.	4.9	637	943.2	-16.0	100	1.50	nnw.		624	0		
						500	959.6	-14.3	98	1.72	n.		490	0	Snow flurries.	
2:12	973.6	-13.1	96	n.	5.4	396	973.6	-13.1	96	1.88	n.	5.4	388		10/10 St., nnw.	

January 26, 1916 (No. 1).

A. M.																
8:53	968.8	-11.0	100	nnw.	4.0	306	968.8	-11.0	100	2.37	nnw.	4.0	388	-----	10/10 St., nne.	
						500	955.8	-11.8	100	2.21	nnw.	5.0	490	-----	Altitude of St. basen about 800 m.	
9:06	969.0	-11.2	100	nnw.	4.5	692	932.1	-13.4	0.81	100	1.91	n.	6.8	679	0	
						750	925.5	-12.1		100	2.16	n.	4.6	735	0	
10:06	969.6	-11.1	100	nnw.	4.0	816	917.8	-10.6	-2.06	100	2.46	nnw.	2.2	800	-----	
						750	925.5	-11.8		100	2.21	nnw.	3.1	735	-----	
10:21	969.7	-11.0	100	nnw.	4.0	655	937.4	-13.6	1.60	100	1.88	n.	4.3	642	-----	Some ice on wire.
						500	956.3	-12.0		100	2.17	nnw.	4.1	490	-----	
10:23	969.7	-11.0	100	nnw.	4.0	396	969.7	-11.0		100	2.37	nnw.	4.0	388	-----	10/10 St., nne.

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.

January 26, 1916 (No. 2).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
P. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
1:35	969.4	-10.6	100	nnw.	4.5	396	969.4	-10.6		100	2.46	nnw.	4.5	388		10/10 St., nnw.
						500	956.3	-11.7		100	2.23	nnw.		490	270	Snowing.
1:40	969.4	-10.6	100	nnw.	5.4	646	938.2	-13.2	1.04	100	1.95	nnw.		633	615	Altitude of St. base about 650 m.
						750	925.3	-11.5		100	2.27	nnw.		735	1,060	
						1,000	895.8	-7.4		100	3.26	nnw.		980		
2:37	969.1	-10.5	100	nnw.	5.8	1,052	889.9	-6.5	-1.88	100	3.53	nnw.		1,031		
						1,060	895.8	-7.6		100	3.21	nnw.		980		
						750	925.1	-12.9		100	2.00	nnw.		735	0	
2:48	969.0	-10.5	100	nnw.	5.4	716	929.3	-13.6	1.00	100	1.88	nnw.		702	0	Some ice on wire.
						500	955.0	-11.4		97	2.22	nnw.		490	0	
2:59	968.9	-10.4	96	nnw.	5.4	396	968.9	-10.4		96	2.41	nnw.	5.4	388		10/10 St., nnw.

January 27, 1916, series (No. 1).

A. M.																Remarks.	
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.		
9:30	978.4	-20.0	100	nnw.	7.2	396	978.4	-20.0		100	1.03	nnw.	7.2	388		8/10 Cl.St., nw.	
						500	964.4	-21.0		97	0.90	nnw.	9.5	490	480	Solar halos 22° and 46°, with	
9:32	978.5	-19.8	100	nnw.	7.2	717	936.9	-23.0	0.93	92	0.71	nnw.	14.3	703	1,440	parhelia; and circumzenithal	
						750	932.3	-22.4		92	0.75	nnw.	14.0	735	1,600	are 60° above horizon—brilliant	
9:50	978.7	-19.8	100	nnw.	7.6	1,000	901.5	-17.6		95	1.23	nnw.	12.1	980	3,340	between 9 & 10 a. m.	
						1,123	887.3	-15.2	-1.92	96	1.56	nnw.	11.2	1,101	4,000	Diminished in brightness	
						1,250	872.4	-13.3		97	1.87	nnw.	12.3	1,225	4,110	after 10 a. m., only a faint	
10:03	978.8	-20.0	100	nnw.	10.3	1,500	844.9	-9.6		98	2.64	wnw.	14.4	1,470	4,340	halo of 22° and parhelia being	
						1,679	825.6	-6.9	-1.49	99	3.38	w.	15.9	1,646	4,500	visible at noon.	
						1,750	818.3	-5.7		99	3.74	w.	16.2	1,715	4,640		
						2,000	793.0	-1.6		98	5.24	w.	17.4	1,960	5,100		
10:12	979.1	-20.0	100	nnw.	9.4	2,040	788.7	-0.9	-1.66	98	5.56	w.	17.6	1,999	5,170		
						2,250	768.3	-1.4		96	5.22	w.	17.4	2,205	5,600		
10:26	979.4	-20.0	100	nnw.	8.5	2,405	754.1	-1.7	0.22	95	5.04	w.	17.3	2,357	6,130		
						2,500	744.8	-2.3		92	4.64	w.	17.6	2,450	6,460		
						2,750	723.3	-3.9		86	3.79	w.	18.4	2,694	7,340		
10:41	979.7	-20.0	100	nnw.	8.5	2,950	704.2	-5.1	0.62	80	3.18	w.	19.0	2,890	8,000	6/10 Cl.St., nw.	
						3,000	699.9	-5.5		80	3.07	w.	18.8	2,939	7,500		
						3,250	677.9	-7.5		78	2.52	w.	18.0	3,184	7,680		
						3,500	656.3	-9.5		76	2.06	wsnw.	17.1	3,429	8,560		
						3,750	635.0	-11.5		73	1.66	wsnw.	16.3	3,673	9,440		
11:17	980.2	-19.3	100	nnw.	8.5	3,815	629.4	-12.0	0.80	72	1.56	wsnw.	16.1	3,737	9,700		
						3,750	635.0	-11.5		72	1.63	wsnw.	16.3	3,673	9,400		
						3,500	656.1	-9.5		72	1.95	wsnw.	17.0	3,429	8,400		
						3,250	677.2	-7.5		71	2.29	wsnw.	17.8	3,184	7,400		
11:41	980.3	-19.0	100	nnw.	7.2	3,156	685.2	-6.7	0.52	71	2.46	wsnw.	18.1	3,092	7,000		
						3,000	698.8	-5.9		71	2.63	wsnw.	17.2	2,939	6,480		
						2,750	722.3	-4.6		70	2.90	w.	15.8	2,694	5,640		
						2,500	744.8	-3.3		69	3.20	wnw.	14.5	2,450	4,800		
11:56	980.4	-19.0	100	nnw.	8.0	2,353	759.1	-2.5	0.27	69	3.42	wnw.	13.7	2,306	4,300		
						2,250	768.3	-2.2		71	3.61	wnw.	14.6	2,205	3,970		
P. M.																Remarks.	
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.		
12:05	980.4	-18.7	100	nnw.	8.0	2,097	783.6	-1.8	-1.35	74	3.89	nnw.	16.0	2,055	3,550		
						2,000	793.2	-3.1		75	3.53	nnw.	15.3	1,960	3,300		
						1,750	819.1	-6.5		77	2.72	nnw.	13.4	1,715	2,630		
12:14	980.5	-18.4	100	nnw.	7.6	1,578	837.4	-8.8	-1.33	78	2.25	nnw.	12.1	1,547	2,107		
						1,500	846.1	-9.8		79	2.09	nnw.	11.8	1,470	1,980		
						1,250	874.1	-13.2		83	1.62	nnw.	10.6	1,225	1,360		
12:26	980.6	-18.5	100	nnw.	7.6	1,151	885.6	-14.5	-3.24	84	1.45	nnw.	10.2	1,128	1,100	4/10 Cl.St., nw.	
						1,000	903.2	-19.4		88	0.96	nnw.	9.7	980	840		
12:30	980.6	-18.5	100	nnw.	7.6	889	917.2	-23.0	0.14	91	0.70	nnw.	9.3	872	670		
12:36	980.6	-18.4	100	nnw.	8.0	819	926.1	-22.9	1.06	92	0.71	nnw.	11.0	803	540		
						750	934.2	-22.2		93	0.77	nnw.	10.4	735	460		
						500	966.4	-19.5		98	1.06	nnw.	8.4	490	140		
12:41	980.7	-18.4	100	nnw.	7.6	396	980.7	-18.4		100	1.20	nnw.	7.6	388		3/10 Cl.St., nw.	

January 27, 1916, series (No. 2).

P. M.																Remarks.	
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.		
1:29	980.9	-18.1	100	nnw.	8.5	396	980.9	-18.1		100	1.23	nnw.	8.5	388		3/10 Cl., nw.	
						500	967.0	-19.2		100	1.11	nnw.	9.3	490	160	Solar halo, 22°, with parhelia.	
						750	935.1	-21.8		100	0.86	nnw.	11.2	735	660		
1:40	980.9	-18.1	100	nnw.	9.4	842	923.5	-22.8	1.05	100	0.78	nnw.	11.9	826	870		
						1,000	904.0	-18.5		100	1.19	nnw.	10.5	980	1,250		
1:45	981.0	-18.1	100	nnw.	8.5	1,119	889.9	-15.3	-2.71	100	1.60	nnw.	9.4	1,097	1,600		
						1,250	874.4	-13.2		100	1.95	nnw.	10.2	1,225	1,680		
2:09	981.0	-17.9	88	nnw.	8.0	1,408	857.0	-10.6	-1.63	100	2.46	nnw.	11.2	1,380	1,800		
						1,500	846.3	-9.3		100	2.76	nnw.	11.3	1,470	2,030		
						1,750	819.9	-5.9		100	3.71	wnw.	11.8	1,715	2,690		
2:12	981.0	-17.9	80	nnw.	8.0	1,967	797.9	-2.9	-1.38	100	4.80	wnw.	12.1	1,928	3,250		
						2,000	794.3	-2.8		99	4.79	wnw.	12.0	1,960	2,350		
2:26	981.1	-18.1	90	nnw.	6.3	2,154	779.5	-2.5	-0.21	92	4.56	w.	11.6	2,111	3,740		
						2,250	769.6	-3.1		91	4.29	w.	11.8	2,205	4,000		
						2,500	745.2	-4.8		90	3.67	w.	12.4	2,450	5,400		
						2,750	722.2	-6.5		88	3.11	w.	12.9	2,694	5,990		
2:40	981.1	-18.1	88	nnw.	8.9	2,817	716.2	-6.7	0.63	87	3.02	w.	13.0	2,760	6,150		
						3,000	700.0	-8.1		86	2.64	w.	13.6	2,939	6,500		
						3,250	678.4	-10.0		85	2.21	w.	14.4	3,184	7,010		
						3,500	656.8	-11.9		84	1.84	wsww.	15.2	3,429	7,520		
						3,750	635.2	-13.7		83	1.54	wsww.	16.0	3,673	8,040		
3:04	981.2	-18.0	88	nnw.	7.2	3,916	621.0	-14.9	0.73	82	1.37	wsww.	16.5	3,835	8,400		
						3,750	635.2	-13.7		82	1.53	wsww.	15.8	3,673	8,040		
						3,500	656.8	-11.9		82	1.80	wsww.	14.7	3,429	7,530		
						3,250	678.6	-10.2		82	2.09	wss.	13.6	3,184	7,000		
						3,000	701.0	-8.4		82	2.45	wsww.	12.5	2,939	6,040		

## OBSERVATIONS AT DREXEL, JANUARY, 1916.

21

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.

January 27, 1916, series (No. 2)—Continued.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.	
P. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
3:34.	981.4	-18.3	88	nw.	0.3	2,750	723.6	-6.7		82	2.85	wsnw.	11.4	2,694	5,060	
						2,500	746.6	-4.9		82	3.32	wsnw.	10.3	2,450	4,070	
3:40.	981.5	-18.3	88	nw.	7.6	2,430	753.3	-4.4	0.46	82	3.46	wsnw.	10.0	2,381	3,800	
						2,250	770.6	-3.6		82	3.71	wsnw.	9.5	2,205	3,490	
3:40.	981.5	-18.3	88	nw.	7.6	2,040	791.2	-2.6	-0.11	82	4.03	w.	9.0	1,999	3,120	
						2,000	795.2	-2.6		82	4.03	w.	9.0	1,960	3,060	
3:51.	981.5	-18.5	88	nw.	8.5	1,750	820.6	-2.9		81	3.89	wnw.	9.0	1,715	2,630	
						1,570	839.9	-3.1	-2.99	80	3.77	nw.	9.0	1,539	2,300	
						1,500	847.0	-5.2		80	3.15	nw.	9.1	1,470	2,190	
						1,250	874.9	-12.6		81	1.66	nw.	9.3	1,225	1,740	
						1,000	904.8	-20.1		82	0.84	nw.	9.5	980	1,150	
4:04.	981.6	-18.4	88	nw.	7.2	904	916.4	-23.0	-1.73	82	0.63	nw.	9.6	886	920	
4:10.	981.7	-18.5	94	nw.	7.2	806	928.9	-21.3	0.66	85	0.77	nw.	11.3	790	755	
						750	936.2	-20.9		86	0.81	nw.	10.5	735	650	
						500	968.2	-19.3		92	1.01	nw.	8.5	490	190	
4:15.	981.7	-18.6	94	nw.	7.6	306	981.7	-18.6		94	1.11	nw.	7.6	388		
															2/10 Cl., nw.	

January 27, 1916, series (No. 3).

F. M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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January 27-28, 1916, series (No. 4).

P. M.														
8:12	984.2	-20.7	93	nw.	4.0	396	984.2	-20.7	93	0.89	nw.	4.0	388	Cloudiness.
						500	969.9	-21.6	93	0.82	nw.	5.9	490	
8:24	984.2	-20.7	86	nw.	3.6	746	938.5	-23.8	94	0.67	nw.	10.4	731	
8:59	984.2	-21.0	92	nw.	4.0	990	908.1	-17.5	100	1.30	nnw.	9.4	971	
10:05	984.1	-21.2	100	nnw.	4.5	1,033	905.3	-17.5	97	1.26	nw.	6.0	983	Clouds appearing.
11:10	984.2	-21.0	92	nnw.	3.1	1,034	902.7	-17.5	97	1.26	nw.	3.7	1,014	
11:17	984.3	-21.0	98	nnw.	4.5	1,181	885.3	-12.1	96	2.06	nw.	3.2	1,158	
11:38	984.3	-20.7	97	n.	4.0	1,017	904.6	-17.6	94	1.21	nnw.	7.2	997	
						1,000	906.5	-18.1	94	1.16	nnw.	7.2	980	10/10 St.
11:46	984.4	-20.7	100	n.	3.6	790	933.0	-24.1	94	0.65	n.	6.6	775	
						750	936.8	-23.7	96	0.68	n.	6.2	735	
						500	969.9	-21.6	98	0.86	n.	3.7	490	
A. M.														
12:07	984.3	-20.7	100	n.	2.7	396	984.3	-20.7	100	0.96	n.	2.7	388	10/10 St.



## SUPPLEMENT NO. 5.

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Continued.  
January 23, 1916, series (No. 5).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Relative humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%	n.	m. p. s.	m.	mb.	° C.		%	mb.	n.	m. p. s.	10 <sup>6</sup> ergs.	volts.	
1:17	982.9	-20.6	100	n.	3.6	396	982.9	-20.6		100	0.97	n.	3.6	388		10/10 St.
						500	968.8	-21.3		100	0.91		4.3	490	0	Snow began 1:31 a. m.
						750	936.6	-23.0		100	0.77		5.8	735	0	
2:11	983.0	-20.2	94	n.	3.6	869	921.6	-23.8	0.68	100	0.71		6.6	852	0	
2:17	183.1	-20.2	93	n.	3.6	985	907.4	-18.9	-4.30	100	1.14		7.2	966	0	
						1,000	905.0	-18.6		100	1.18		6.6	980	300	
						1,083	895.1	-16.7	-2.24	100	1.41	ne.	3.0	1,062	730	
4:38	982.5	-20.1	100	ne.	4.9	1,246	875.9	-11.2	-3.37	100	2.33	e.	4.3	1,221		
4:43	982.4	-20.1	100	ne.	5.4	1,480	850.0	-6.4	-2.05	100	3.56	se.	8.7	1,451		
4:48	982.3	-20.0	100	ne.	4.0	1,500	847.4	-6.2		100	3.62	se.	9.1	1,470		
						1,750	821.2	-3.1		100	4.71	sse.	13.5	1,715		
4:50	982.3	-20.0	99	ne.	4.0	1,834	812.7	-2.1	-1.21	100	5.13	sse.	15.0	1,798		
5:01	982.1	-19.9	95	ne.	4.5	1,982	797.8	-2.2	0.04	100	5.09	ssw.	16.0	1,943		
5:06	982.1	-19.9	99	ne.	4.9	1,786	817.8	-2.2	-1.57	100	5.09	s.	16.0	1,750	3,110	
						1,750	821.2	-2.8		100	4.84	sse.	15.2	1,715	3,000	
						1,500	847.4	-6.7		100	3.47	se.	9.9	1,470	1,860	
5:12	982.0	-20.0	96	ne.	4.9	1,429	855.1	-7.8	-2.65	100	3.15	ese.	8.4	1,401	1,540	
						1,250	875.2	-12.5		100	2.07	e.	7.5	1,225	720	
5:22	982.0	-20.2	99	nne.	4.9	1,067	896.8	-17.4	-1.62	100	1.32	ne.	6.6	1,047	0	
						1,000	905.0	-18.5		100	1.19	ne.	6.6	980	0	
						750	936.1	-22.5		100	0.80	ne.	6.5	735	0	
5:30	982.0	-20.1	100	nne.	4.5	721	939.5	-23.0	0.86	100	0.77	ne.	6.5	707	0	
						500	968.1	-21.1		100	0.92	nne.	5.4	490	0	Snowing.
5:37	981.9	-20.2	100	nne.	4.9	396	981.9	-20.2		100	1.01	nne.	4.9	388		10/10 St.

## January 23, 1916, series (No. 6).

A. M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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## January 23, 1916, series (No. 7).

A. M.																	
10:12	979.3	-19.0	100	ne.	5.4	396	979.3	-19.0	-----	100	1.13	ne.	5.4	388	-----	10/10 St., se.	
						500	965.3	-19.9		100	1.04	ene.	7.3	490	(†)	Light snow.	
10:20	979.2	-18.7	100	ne.	5.8	647	946.7	-21.1	0.84	100	0.92	ese.	9.9	634	(†)		
						750	933.8	-16.2		100	1.48	ese.	12.2	735	(†)		
10:25	979.2	-18.5	100	ne.	5.8	761	932.3	-15.7	-4.74	100	1.55	ese.	12.4	746	(†)		
						1,000	903.3	-11.1		100	2.35	se.	14.3	980	(†)		
10:38	979.1	-18.4	100	ne.	6.3	1,221	877.9	-6.8	-1.93	100	3.44	sse.	16.1	1,197	(†)	Altitude of St. base about	
						1,250	874.5	-6.4		100	3.56	sse.	16.2	1,225	(†)	1,400 m.	
						1,500	847.2	-3.2		100	4.68	s.	17.0	1,470	(†)		
10:48	979.0	-18.2	100	ene.	6.3	1,649	831.6	-1.3	-1.29	100	5.48	s.	17.5	1,616	(†)		
						1,750	821.1	-1.2		100	5.53	s.	17.8	1,715	(†)		
10:56	978.9	-18.0	100	ene.	6.3	1,927	803.2	-1.0	-0.14	100	5.62	s.	18.2	1,889	(†)		
						1,750	821.1	-1.3		100	5.48	s.		1,715	(†)		
						1,647	831.6	-1.5	-0.71	100	5.39	s.		1,614	(†)		
11:15	978.8	-17.6	100	ene.	7.2	1,500	847.2	-2.5		100	4.96	sse.		1,470	(†)	Kites came down due to being	
11:42	978.7	-17.3	100	ene.	6.7	1,389	890.5	-3.4		100	4.60	sse.		1,353	(†)	heavily loaded with ice.	

\* Potential more than 10,000 volts, 7:29 to 8:20 a. m.

† Potential more than 10,000 volts.

## OBSERVATIONS AT DREXEL, JANUARY, 1916.

23

TABLE 2.—Free-air data from kite flights at Drexel Aerological Station, January, 1916—Concluded.

January 29, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Relative humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap- pres	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
9:39.....	974.1	-17.8	100	nnw.	6.7	396	974.1	-17.8		100	1.27	nnw.	6.7	388	.....	10/10 St., nw.
.....	.....	.....	.....	.....	.....	500	960.8	-18.1		97	1.19	nnw.	9.6	490	0	
9:43.....	974.2	-18.0	100	nnw.	6.7	662	940.2	-18.6	0.31	92	1.09	nnw.	14.2	649	0	
.....	.....	.....	.....	.....	.....	750	929.6	-17.7		94	1.20	nnw.	11.9	735	0	
.....	.....	.....	.....	.....	.....	1,000	899.4	-15.0		98	1.62	wnw.	5.5	980	1,700	Altitude of St. base about 1,050 m.
10:30.....	974.8	-18.0	100	nw.	6.7	1,043	894.1	-14.5	-1.08	99	1.71	wnw.	4.4	1,023	2,110	
.....	.....	.....	.....	.....	.....	1,250	870.7	-11.7		100	2.23	w.	6.0	1,225	3,640	
P. M.																
12:26.....	975.5	-17.4	94	nw.	7.2	1,321	862.9	-10.7	-1.37	100	2.44	w.	6.6	1,295	.....	Few Cl., wsw.
.....	.....	.....	.....	.....	.....	1,500	843.0	-6.1		100	3.65	w.	8.5	1,470	.....	
12:27.....	975.5	-17.4	94	nw.	7.2	1,525	840.6	-5.5	-2.55	100	3.84	w.	8.8	1,495	.....	
.....	.....	.....	.....	.....	.....	1,750	816.9	-4.8		96	3.92	w.	11.4	1,715	.....	
.....	.....	.....	.....	.....	.....	2,000	792.3	-3.9		92	4.06	w.	14.3	1,960	.....	
12:29.....	975.5	-17.4	95	nw.	5.8	2,044	787.0	-3.8	-0.33	91	4.04	w.	14.8	2,003	.....	
12:31.....	975.5	-17.4	97	nw.	5.8	2,212	770.5	-3.8	0.00	84	3.73	w.	14.8	2,168	.....	
.....	.....	.....	.....	.....	.....	2,250	767.0	-4.0		83	3.63	w.	15.1	2,205	.....	
.....	.....	.....	.....	.....	.....	2,500	743.1	-5.4		77	2.99	w.	16.9	2,450	.....	
12:35.....	975.5	-17.5	100	nw.	6.7	2,673	726.6	-6.3	0.54	73	2.67	w.	18.2	2,619	5,850	
.....	.....	.....	.....	.....	.....	2,750	719.9	-6.7		77	2.67	w.	19.5	2,694	6,080	
12:42.....	975.4	-17.4	100	nw.	5.4	2,991	697.8	-8.1	0.40	91	2.79	wsww.	23.6	2,930	6,800	
.....	.....	.....	.....	.....	.....	2,750	719.9	-6.7		84	2.81	wsww.	20.6	2,694	6,110	
.....	.....	.....	.....	.....	.....	2,500	743.1	-5.4		76	2.77	wsww.	17.5	2,450	5,380	
12:58.....	975.3	-17.0	96	nnw.	4.9	2,379	754.1	-5.0	0.76	72	2.74	wsww.	16.0	2,331	5,300	
.....	.....	.....	.....	.....	.....	2,250	767.0	-4.6		70	2.90	wsww.	15.7	2,205	4,750	
1:03.....	975.3	-16.9	96	nnw.	7.2	2,141	777.1	-3.8	-0.21	69	3.06	wsww.	15.4	2,098	4,410	
.....	.....	.....	.....	.....	.....	2,000	792.3	-4.1		72	3.12	w.	14.8	1,960	3,980	
.....	.....	.....	.....	.....	.....	1,750	816.9	-4.6		76	3.15	wnw.	13.8	1,715	3,200	
1:14.....	975.3	-17.1	95	nw.	6.3	1,618	830.5	-4.9	0.29	79	3.20	wnw.	13.2	1,585	2,800	
.....	.....	.....	.....	.....	.....	1,500	843.0	-6.1		80	3.32	nw.	10.8	1,470	2,500	
1:18.....	975.3	-17.0	97	nnw.	6.7	1,412	852.6	-4.3	-3.25	80	3.41	nw.	9.0	1,384	2,280	
.....	.....	.....	.....	.....	.....	1,250	870.7	-9.6		80	2.15	nw.	10.6	1,225	1,860	
1:25.....	975.3	-17.0	100	nnw.	6.3	1,209	875.0	-10.9	-2.77	80	1.91	nw.	11.0	1,185	1,750	
.....	.....	.....	.....	.....	.....	1,000	899.4	-16.7		80	1.13	nnw.	9.7	980	1,410	
1:32.....	975.3	-17.1	95	n.	7.2	884	913.4	-19.9	0.57	80	0.83	n.	9.0	867	1,220	
.....	.....	.....	.....	.....	.....	750	929.6	-19.1		85	0.95	n.	8.3	735	1,000	
.....	.....	.....	.....	.....	.....	500	962.1	-17.7		96	1.23	nnw.	6.9	490	360	
1:42.....	975.3	-17.1	100	nnw.	6.3	396	975.3	-17.1		100	1.35	nnw.	6.3	388	.....	Few Cl., wsw.

January 30, 1916.

P. M.																	
3:44.....	968.9	-15.0	95	n.	4.0	396	968.9	-15.0	05	1.57	n.	4.0	388	.....	8/10 St.Cu., sw.		
.....	.....	.....	.....	.....	.....	500	956.3	-16.0	05	1.42	n.	5.6	490	230			
3:55.....	968.9	-15.0	86	n.	4.9	613	941.5	-17.1	01	1.28	n.	7.4	601	460			
.....	.....	.....	.....	.....	.....	750	925.1	-12.3	01	1.02	nnw.	3.6	735	590			
4:50.....	969.0	-14.7	86	n.	3.6	760	923.5	-11.9	91	1.99	nnw.	3.3	745	590			
5:29.....	969.1	-14.6	90	n.	3.6	957	900.3	-6.6	96	3.36	nw.	3.0	938	615	10/10 St.Cu., sw.		
.....	.....	.....	.....	.....	.....	1,000	895.7	-7.0	93	3.14	nw.	3.2	980	.....			
5:46.....	969.2	-14.6	90	n.	4.5	1,054	889.6	-7.5	90	2.91	nnw.	3.5	1,033	.....			
.....	.....	.....	.....	.....	.....	1,000	895.7	-7.6	89	2.86	nnw.	3.9	980	.....			
5:56.....	969.3	-14.6	90	n.	3.1	781	921.6	-7.8	88	2.77	n.	5.5	766	0			
.....	.....	.....	.....	.....	.....	750	926.0	-8.6	88	2.59	n.	5.3	735	0			
5:59.....	969.3	-14.6	90	n.	3.1	500	956.0	-15.0	87	1.44	n.	4.0	490	0			
6:00.....	969.3	-14.6	90	n.	3.6	396	969.3	-14.6	90	1.54	n.	3.6	388	.....	10/10 St.Cu., sw.		

January 31, 1916.

A. M.																	
11:24.....	980.1	-17.2	83	n.	4.5	396	980.1	-17.2		83	1.11	n.	4.5	388	.....	7/10 Cl., wsw.	
.....	.....	.....	.....	.....	.....	500	966.5	-18.3		76	0.92	nnw.	7.8	490	420		
11:32.....	980.2	-16.8	79	nnw.	3.6	524	963.6	-18.5	1.02	74	0.88	nnw.	8.6	514	520		
.....	.....	.....	.....	.....	.....	750	934.8	-17.7		77	0.99	nnw.	15.8	735	1,400		
11:39.....	980.3	-16.7	78	nnw.	4.5	867	920.4	-17.3	-0.35	78	1.04	nnw.	19.5	850	1,800		
11:49.....	980.4	-16.1	80	nnw.	4.9	971	908.0	-17.7	0.38	76	0.97	nw.	16.8	952	2,040		
.....	.....	.....	.....	.....	.....	1,000	904.3	-17.2		76	1.02	nw.	16.7	980	2,110		
11:51.....	980.5	-16.0	80	nnw.	4.9	1,162	885.2	-14.6	-1.62	76	1.30	nw.	16.4	1,139	2,320		
.....	.....	.....	.....	.....	.....	1,250	875.1	-15.0		76	1.25	nw.	16.5	1,225	2,740		
.....	.....	.....	.....	.....	.....	1,500	846.8	-16.1		75	1.12	nw.	16.7	1,470	3,640		
NOON.....	980.6	-15.8	80	nnw.	4.9	1,601	835.4	-16.5	0.43	75	1.07	nw.	16.8	1,609	4,000	7/10 Cl., wsw.	
P. M.																	
12:02.....	980.6	-15.8	80	nnw.	4.9	1,693	825.2	-14.6	-2.07	75	1.28	nw.	15.4	1,699	4,300		
.....	.....	.....	.....	.....	.....	1,750	819.2	-14.9		76	1.27	nw.	15.6	1,715	4,470		
.....	.....	.....	.....	.....	.....	2,000	792.1	-16.4		77	1.12	wnw.	16.3	1,960	5,110		
12:28.....	980.8	-15.2	86	nnw.	3.1	2,118	780.1	-17.1	0.59	78	1.05	wnw.	16.6	2,076	5,400		
.....	.....	.....	.....	.....	.....	2,250	765.8	-17.9		78	0.98	wnw.	16.9	2,205	6,800		
.....	.....	.....	.....	.....	.....	2,500	740.5	-19.6		79	0.85	wnw.	17.5	2,450	6,500		
12:50.....	980.9	-14.4	76	nw.	4.5	2,667	724.8	-20.3	0.58	79	0.79	wnw.	17.8	2,613	7,030	4/10 Cl., wsw.	
.....	.....	.....	.....	.....	.....	2,750	716.6	-20.3		79	0.79	wnw.	18.0	2,694	7,150		
.....	.....	.....	.....	.....	.....	3,000	693.2	-20.1		80	0.82	wnw.	18.5	2,930	7,320		
1:31.....	981.1	-14.2	82	nw.	6.3	3,059	688.0	-20.1	-0.05	80	0.82	wnw.	18.6	2,997	7,600		
.....	.....	.....	.....	.....	.....	3,250	670.3	-20.8		79	0.75	w.	17.8	3,184	8,490		
1:48.....	981.2	-14.1	78	nw.	8.0	3,365	660.0	-21.2	0.35	78	0.71	w.	17.3	3,296	9,000		
.....	.....	.....	.....	.....	.....	3,250	670.3	-20.8		79	0.75	w.	17.3	3,184	8,550		
.....	.....	.....	.....	.....	.....	3,000	693.2	-20.1		80	0.82	wnw.	17.2	2,930	7,290		
.....	.....	.....	.....	.....	.....	2,750	716.6	-19.4		81	0.88	wnw.	17.2	2,694	6,740		
2:32.....	981.1	-13.2	75	nw.	8.9	2,689	723.2	-18.9	0.35	82	0.93	wnw.	17.2	2,638	6,500	2/10 Cl., wsw.	
.....	.....	.....	.....	.....	.....	2,500	740.5	-18.2		82	1.00	wnw.	.....	2,450	6,210		
.....	.....	.....	.....	.....	.....	2,250	765.8	-17.3		83	1.10	wnw.	.....	2,205	5,700		
.....	.....	.....	.....	.....	.....	2,000	792.1	-16.5		84	1.20	wnw.	.....	1,960	.....	Few Cl., wsw.	
3:10.....	981.0	-13.5	83	nw.	8.0	1,899	803.5	-16.1		84	1.25	wnw.	.....	1,861	.....	Kites broke away.	

TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916.

February 1, 1916 (No. 1).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.	m. p. s.	10 <sup>6</sup> ergs.	volts.	Cloudless.	
8:48	987.0	-21.5	100	wnw.	3.6	396	987.0	-21.5		100	0.89	wnw.	3.6	388		0
						500	973.0					wnw.	6.3	490		0
						750	941.3					nw.	12.9	735		0
8:56	987.2	-20.8	100	wnw.	4.5	829	931.4					nw.	15.0	813		0
						1,000	910.1					nw.	17.4	980		760
						1,250	880.1					nw.	20.8	1,225		1,890
9:05	987.2	-20.5	100	wnw.	3.6	1,280	876.5					nw.	21.2	1,255		2,000
						1,500	851.2					wnw.	20.6	1,470		3,110
9:15	987.4	-20.1	100	wnw.	4.0	1,522	848.7					wnw.	20.5	1,492		3,200
						1,750	823.0					wnw.	17.7	1,715		3,230
10:03	987.8	-18.7	100	wnw.	3.1	1,986	797.6					wnw.	14.8	1,946		3,260
						2,000	795.8					wnw.	14.9	1,960		3,260
						2,250	769.7					wnw.	16.0	2,205		3,300
P. M.																
12:42	987.8	-16.9	100	nw.	5.4	2,303	764.3					wnw.	16.3	2,257		3,300
						2,500	744.3					wnw.	16.2	2,450	3,430	
						2,750	719.8					wnw.	16.1	2,694	3,570	
1:10	987.5	-16.7	89	nw.	4.5	2,805	714.3					wnw.	16.1	2,748	3,600	
						2,750	719.8					wnw.	16.0	2,694	3,490	
						2,500	744.3					wnw.	15.6	2,450	2,970	
1:27	987.3	-16.5	90	nw.	7.2	2,288	765.5					wnw.	15.3	2,242	2,500	
						2,250	769.7					wnw.	15.1	2,205	2,470	
						2,000	795.8					wnw.	13.8	1,960	2,100	
						1,750	823.0					wnw.	12.4	1,715	1,740	
						1,500	851.2					nw.	11.0	1,470	1,380	
						1,250	880.1					nw.	9.7	1,225	1,010	
1:47	987.0	-16.5	90	nw.	7.2	1,135	893.7					nw.	9.1	1,113	835	
						1,000	909.8					nw.	9.1	980	520	
1:57	986.9	-16.6	89	nw.	6.3	794	935.5					nw.	9.0	779	0	
						750	940.8					nw.	8.7	735	0	
						500	973.0					nw.	7.3	490	0	
2:07	986.9	-16.5	90	nw.	6.7	396	986.9	-16.5		90	1.20	nw.	6.7	388	0	Cloudless.

February 1, 1916 (No. 2).

P. M.																
2:40.....	986.6	-16.7	94	wnw.	4.5	396	986.6	-16.7		94	1.33	wnw.	4.5	388	0	Cloudless.
						500	973.0	-17.8		92	1.17	wnw.	5.0	490	0	
2:50.....	986.6	-16.6	89	nw.	5.4	743	941.8	-20.4	1.07	88	0.87	nw.	6.1	729	0	
						750	940.7	-20.5		88	0.86	nw.	6.1	735	40	
3:06.....	986.5	-16.7	92	nw.	5.4	925	918.6	-22.7	1.26	90	0.71	nnw.	6.1	907	680	
						1,000	900.2	-20.0		90	0.93	nnw.	7.4	980	960	
4:12.....	986.1	-16.7	89	nnw.	2.7	1,076	899.8	-17.3	-3.58	90	1.20	nw.	8.7	1,053		
						1,250	879.3	-17.3		90	1.20	nw.	9.0	1,225		
4:16.....	986.1	-16.8	91	nnw.	3.6	1,487	851.9	-17.3	0.01	89	1.18	nw.	9.4	1,458		
						1,250	879.3	-17.2		89	1.19	nnw.	7.9	1,225		
4:22.....	986.1	-16.9	92	nnw.	3.1	1,033	905.1	-17.2	-2.98	89	1.19	nnw.	6.5	1,013		
						1,000	909.2	-18.2		89	1.09	nnw.	6.2	980		
4:25.....	986.1	-17.0	90	nnw.	3.1	902	921.3	-21.1	0.44	89	0.82	nnw.	5.4	884		
						750	940.7	-20.4		90	0.89	nnw.	4.5	735		
4:34.....	986.1	-17.0	89	nnw.	3.1	674	950.1	-20.1	1.12	90	0.92	nnw.	4.1	661		
						500	973.0	-18.2		89	1.09	nw.	3.5	490	0	
4:40.....	986.1	-17.0	89	nw.	3.1	396	986.1	-17.0		89	1.22	nw.	3.1	388	0	Cloudless.

February 2, 1916.

P. M.																
4:15.....	982.5	-11.2	71	w.	4.5	396	982.5	-11.2		71	1.65	w.	4.5	388		4/10 ClCu., nw.
						500	969.0	-12.2		73	1.55	w.	4.9	490	230	
4:23.....	982.5	-11.7	77	w.	4.5	727	940.7	-14.4	0.97	78	1.36	wsu.	5.7	713	705	
						750	937.6	-14.6		78	1.33	wsu.	6.2	735	760	
4:30.....	982.5	-11.7	73	wsu.	3.6	871	923.0	-15.7	0.90	78	1.21	w.	8.8	854	1,030	
						1,000	907.1	-16.0		79	1.18	w.	8.8	980	1,310	
4:45.....	982.5	-11.5	70	wsu.	3.1	1,220	881.2	-16.6	0.26	81	1.15	w.	8.7	1,196	1,800	Parhelia observed.
						1,250	877.6	-16.5		80	1.14	w.	8.8	1,225	1,870	
5:10.....	982.5	-12.6	80	wsu.	2.7	1,425	857.3	-15.6	-0.49	74	1.15	wnw.	9.7	1,397	2,200	
						1,500	849.0	-15.7		73	1.13	wnw.	10.0	1,470	2,240	
5:15.....	982.6	-12.7	80	wsu.	2.7	1,651	832.2	-15.9	0.04	72	1.09	wnw.	10.7	1,618		
						1,500	849.0	-16.0		71	1.06	wnw.	9.1	1,470		
5:25.....	982.6	-13.1	84	w.	3.1	1,439	856.0	-16.0	0.46	70	1.05	wnw.	8.5	1,411		
						1,250	877.6	-15.1		71	1.16	wnw.	10.1	1,225		
5:27.....	982.6	-13.2	84	w.	3.1	1,244	878.5	-15.1	-0.31	71	1.16	wnw.	10.2	1,220	1,900	2/10 Cl., nw.
						1,000	907.1	-15.9		72	1.09	w.	7.2	940	620	
5:36.....	982.7	-13.2	84	wsu.	3.1	894	920.2	-16.2	0.89	73	1.08	w.	5.9	877	490	
5:42.....	982.7	-13.2	84	wsu.	2.7	771	935.3	-15.1	0.73	74	1.21	w.	6.6	756	0	
						750	937.6	-14.9		74	1.24	w.	6.4	735	0	
						500	969.0	-13.1		75	1.47	wsu.	3.5	490	0	
5:48.....	982.7	-13.5	87	wsu.	2.7	429	978.4	-12.6	-3.33	75	1.54	wsu.	2.7	421	0	
5:52.....	982.8	-13.7	87	wsu.	2.2	396	982.8	-13.7		87	1.62	wsu.	2.2	388	0	2/10 Cl., nw.

February 3, 1916.

P. M.																
2:17.....	987.5	-12.5	88	n.	2.7	396	987.5	-12.5		88	1.82	n.	2.7	388		3/10 Cl.St., w.
						500	973.3	-13.9		90	1.65	n.	3.8	490	0	
2:54.....	987.2	-12.5	87	n.	2.7	617	958.9	-15.5	1.32	92	1.44	n.	5.0	605	0	
						500	973.3	-14.0		89	1.61	n.	4.0	490	0	
3:10.....	987.2	-12.7	86	n.	3.1	396	987.2	-12.7		86	1.75	n.	3.1	388	0	



## OBSERVATIONS AT DREXEL, FEBRUARY, 1916.

TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Continued.

February 4, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%	e.	m. p. s.	m.	mb.	° C.		%	mb.	e.	m. p. s.	10 <sup>6</sup> ergs.	volts.	
9:19.....	973.5	-13.1	100	e.	4.9	396	973.5	-13.1	.....	100	1.96	e.	4.9	388	.....	10/10 St., sse.
9:23.....	973.5	-13.0	100	e.	4.0	504	959.8	-14.0	0.83	100	1.81	se.	10.3	494	2,500	Snowing.
.....	.....	.....	.....	.....	.....	750	928.7	-12.3	.....	100	2.11	sse.	12.6	735	3,970	Altitude of St. base 700 to 800 m.
.....	.....	.....	.....	.....	.....	1,000	899.1	-10.6	.....	100	2.46	sse.	14.9	980	5,420	
9:32.....	973.4	-12.7	100	e.	3.6	1,250	870.8	-8.9	.....	100	2.86	s.	17.2	1,225	7,970	
.....	.....	.....	.....	.....	.....	1,297	865.6	-8.6	-0.68	100	2.94	s.	17.6	1,271	8,400	
.....	.....	.....	.....	.....	.....	1,500	843.2	-9.5	.....	100	2.71	ssw.	18.9	1,470	(*)	
9:47.....	973.4	-12.4	100	e.	5.4	1,610	831.2	-10.0	0.42	100	2.60	ssw.	19.6	1,578	(*)	
.....	.....	.....	.....	.....	.....	1,500	843.2	-9.6	.....	100	2.60	ssw.	18.5	1,470	(*)	
10:06.....	973.2	-12.1	100	e.	4.9	1,281	867.3	-8.7	-0.57	100	2.91	s.	16.3	1,256	.....	
.....	.....	.....	.....	.....	.....	1,250	870.8	-8.9	.....	100	2.86	s.	16.1	1,225	.....	Wire heavily coated with ice.
.....	.....	.....	.....	.....	.....	1,000	899.1	-10.3	.....	100	2.53	sse.	14.2	980	.....	
10:26.....	972.8	-11.7	100	e.	3.6	750	928.7	-11.7	.....	100	2.23	se.	12.4	735	.....	
.....	.....	.....	.....	.....	.....	543	954.4	-12.9	0.83	100	2.00	ese.	10.9	532	.....	
.....	.....	.....	.....	.....	.....	500	959.6	-12.5	.....	100	2.07	ese.	8.8	490	.....	Snowing.
10:27.....	972.8	-11.7	100	e.	3.6	396	972.8	-11.7	.....	100	2.23	e.	3.6	388	.....	10/10 St., sse.

February 6, 1916.

A. M.																	
10:08.....	971.1	-13.6	96	s.	4.5	396	971.1	-13.6	.....	96	1.89	s.	4.5	388	.....	7/10 Cl., nw.; 3/10 Cl., nw.	
.....	.....	.....	.....	.....	.....	500	957.8	-13.2	.....	97	1.89	ssw.	6.6	490	340		
10:11.....	971.2	-13.3	94	s.	4.9	729	930.8	-12.3	-0.40	99	2.09	sw.	11.1	706	1,050	Partial solar halo.	
.....	.....	.....	.....	.....	.....	750	927.1	-12.7	.....	99	2.02	swsw.	11.8	735	1,150		
10:18.....	971.3	-13.0	92	ssw.	4.9	795	921.9	-13.2	1.20	99	1.93	w.	12.6	779	1,600	Parhelia.	
.....	.....	.....	.....	.....	.....	1,000	897.8	-10.2	.....	99	2.52	wnw.	13.2	980	2,470		
.....	.....	.....	.....	.....	.....	1,250	870.1	-6.5	.....	99	3.49	wnw.	13.9	1,225	2,720		
11:27.....	972.4	-9.0	88	swsw.	4.5	1,437	850.0	-3.7	-1.48	99	4.44	nw.	14.5	1,409	2,820	7/10 Cl., nw.	
.....	.....	.....	.....	.....	.....	1,500	843.3	-3.9	.....	98	4.32	nw.	14.7	1,470	2,860		
11:28.....	972.4	-9.0	88	swsw.	4.5	1,615	831.2	-4.4	0.39	97	4.09	nw.	15.1	1,583	2,920		
.....	.....	.....	.....	.....	.....	1,750	816.8	-4.3	.....	87	3.71	nw.	17.1	1,715	3,000		
11:37.....	972.4	-8.7	84	swsw.	4.0	1,938	797.6	-4.2	-0.06	72	3.10	nw.	20.0	1,890	3,360		
.....	.....	.....	.....	.....	.....	2,000	791.4	-4.6	.....	68	2.82	nw.	21.2	1,960	3,460		
11:39.....	972.4	-8.7	84	swsw.	4.0	2,138	777.6	-5.4	0.60	59	2.29	nw.	23.8	2,065	3,680	2/10 Cl., nw.	
.....	.....	.....	.....	.....	.....	2,250	766.1	-5.1	.....	53	2.11	nw.	25.5	2,205	3,870		
11:46.....	972.5	-8.7	84	swsw.	4.0	2,306	761.2	-5.0	-0.24	50	2.00	nw.	26.4	2,260	4,000		
.....	.....	.....	.....	.....	.....	2,500	742.0	-6.4	.....	56	1.99	nw.	27.7	2,450	3,850		
.....	.....	.....	.....	.....	.....	2,750	718.8	-8.2	.....	63	1.92	wnw.	29.3	2,694	3,930		
P. M.																	
12:02.....	972.6	-9.4	86	swsw.	5.4	2,767	717.6	-8.3	0.72	64	1.93	wnw.	29.4	2,711	3,940		
.....	.....	.....	.....	.....	.....	3,000	695.9	-10.3	.....	77	1.95	wnw.	31.7	2,939	4,090		
12:20.....	972.6	-10.6	90	w.	5.8	3,022	693.8	-10.5	-0.76	78	1.93	wnw.	31.9	2,961	4,100		
.....	.....	.....	.....	.....	.....	3,000	695.9	-10.4	.....	78	1.96	wnw.	31.7	2,939	4,080		
.....	.....	.....	.....	.....	.....	2,750	718.8	-8.8	.....	78	2.25	nw.	29.0	2,694	3,720		
.....	.....	.....	.....	.....	.....	2,500	742.0	-7.1	.....	78	2.61	nw.	26.2	2,450	3,370		
12:38.....	972.6	-10.4	88	nw.	4.5	2,487	743.3	-7.0	0.23	78	2.64	nw.	26.1	2,437	3,340	Few ClSt., nw.	
12:51.....	972.6	-10.2	87	wnw.	5.4	2,316	759.6	-6.6	-0.76	57	2.00	wnw.	23.1	2,269	3,100		
12:53.....	972.6	-10.1	85	wnw.	4.0	2,250	766.1	-7.1	0.32	53	1.78	wnw.	22.4	2,205	2,930		
.....	.....	.....	.....	.....	.....	2,000	791.4	-6.3	.....	41	1.47	nw.	19.1	1,960	2,420		
1:05.....	972.6	-9.6	81	nw.	5.4	1,970	794.2	-6.2	-0.06	40	1.45	nw.	18.7	1,931	2,370		
1:07.....	972.6	-9.6	82	nw.	5.4	1,896	810.9	-6.3	0.50	39	1.40	nw.	18.2	1,770	2,100		
.....	.....	.....	.....	.....	.....	1,750	816.8	-6.0	.....	39	1.44	nw.	18.1	1,715	2,000		
1:17.....	972.6	-9.5	84	nw.	4.5	1,565	836.2	-5.1	-0.41	40	1.59	nw.	17.6	1,534	1,650		
.....	.....	.....	.....	.....	.....	1,500	843.3	-5.4	.....	42	1.63	nw.	17.1	1,470	1,590		
.....	.....	.....	.....	.....	.....	1,250	870.4	-6.4	.....	51	1.82	nw.	15.3	1,225	1,180		
1:22.....	972.6	-9.4	81	nw.	4.0	1,201	876.0	-6.6	-1.84	53	1.86	nw.	15.0	1,177	1,100		
.....	.....	.....	.....	.....	.....	1,000	899.1	-10.3	.....	63	1.59	wnw.	13.6	980	540		
1:32.....	972.6	-9.2	84	nw.	3.6	853	916.5	-13.0	0.83	70	1.39	wnw.	12.6	836	190		
.....	.....	.....	.....	.....	.....	750	928.7	-11.7	.....	74	1.65	wnw.	9.4	735	0		
.....	.....	.....	.....	.....	.....	500	939.2	-10.1	.....	78	2.00	nw.	5.3	490	0		
1:42.....	972.6	-9.2	81	nw.	3.1	396	972.6	-9.2	.....	81	2.26	nw.	3.1	388	.....	Few ClSt., nw.	

February 7, 1916.

P. M.																	
2:00.....	980.4	-14.0	73	s.	4.0	336	980.4	-14.0	.....	73	1.32	s.	4.0	388	.....	3/10 CLst, w.	
.....	.....	.....	.....	.....	.....	500	966.1	-14.7	.....	72	1.22	s.	4.4	490	900		
.....	.....	.....	.....	.....	.....	750	934.1	-16.4	.....	71	1.03	ssw.	5.5	735	920		
3:00.....	979.0	-13.4	69	s.	4.0	960	908.5	-17.8	0.67	70	0.89	ssw.	6.4	941	1,630		
.....	.....	.....	.....	.....	.....	1,000	903.7	-17.4	.....	70	0.92	ssw.	6.8	980	1,900		
.....	.....	.....	.....	.....	.....	1,250	874.2	-14.7	.....	69	1.17	ssw.	9.1	1,225	2,700		
.....	.....	.....	.....	.....	.....	1,500	846.0	-12.0	.....	69	1.50	sw.	11.4	1,470	3,600		
3:12.....	978.8	-13.0	67	s.	4.0	1,688	825.3	-10.0	-1.07	68	1.77	sw.	13.2	1,654	4,200		
.....	.....	.....	.....	.....	.....	1,750	818.9	-7.1	.....	70	2.34	ssw.	13.2	1,715	4,360		
3:18.....	978.7	-12.4	61	ssw.	4.5	1,867	806.8	-1.5	-4.75	74	3.99	w.	13.2	1,830	4,670	2/10 CLst., w.	
.....	.....	.....	.....	.....	.....	2,000	793.3	-1.2	.....	71	3.93	w.	13.6	1,960	5,020		
3:25.....	978.6	-12.4	61	s.	4.5	2,184	775.3	-0.7	-0.25	68	3.92	w.	14.2	2,140	5,500		
.....	.....	.....	.....	.....	.....	2,250	769.3	-1.1	.....	68	3.79	w.	14.6	2,205	5,730		
.....	.....	.....	.....	.....	.....	2,500	745.7	-2.5	.....	69	3.42	w.	16.0	2,450	6,590		
.....	.....	.....	.....	.....	.....	2,750	722.8	-4.0	.....	69	3.02	w.	17.5	2,694	7,460		
.....	.....	.....	.....	.....	.....	3,000	700.4	-5.4	.....	69	2.68	w.	19.0	2,939	8,460		
.....	.....	.....	.....	.....	.....	3,250	678.7	-6.8	.....	69	2.37	wnw.	20.4	3,184	8,560		
.....	.....	.....	.....	.....	.....	3,500	657.2	-8.2	.....	69	2.10	wnw.	21.8	3,429	9,060		
.....	.....	.....	.....	.....	.....	3,750	636.3	-9.7	.....	69	1.84	wnw.	23.3	3,673	9,530		
.....	.....	.....	.....	.....	.....	4,000	615.8	-11.2	.....	70	1.63	wnw.	24.7	3,918	.....		
3:50.....	978.1	-12.5	68	s.	4.0	4,101	607.4	-11.8	0.65	70	1.55	wnw.	25.3	4,017	.....	2/10 CL., w.	
.....	.....	.....	.....	.....	.....	4,000	615.8	-11.2	.....	70	1.63	wnw.	24.9	3,918	.....		
.....	.....	.....	.....	.....	.....	3,750	636.3	-9.5	.....	71	1.92	wnw.	23.9	3,673	.....		
.....	.....	.....	.....	.....	.....	3,500	657.2	-8.0	.....	72	2.23	wnw.	20.8	3,420	.....		

\* Potential over 10,000 volts.

TABLE 3.—Free-air data from kite flights at Drezel Aerological Station, February, 1916—Continued.

February 7, 1916—Continued.

Surface.						At different heights above sea.											Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.		
P. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.		
						3,250	678.7	-0.6		73	2.56	w.	21.8	3,184			
						3,000	700.4	-5.1		74	2.95	w.	20.8	2,939	7,570		
						2,750	722.8	-3.8		75	3.33	w.	19.7	2,694	6,660		
4.44	977.3	-13.3	70	s.	4.9	2,519	744.2	-2.4	0.46	76	3.80	w.	18.7	2,455	5,800		
						2,500	745.7	-2.3		75	3.78	w.	18.6	2,450	5,780		
						2,250	769.3	-1.2		74	4.09	w.	17.0	2,205	5,520		
						2,000	793.7	0.0		73	4.46	wsnw.	15.4	1,960	4,250		
4.53	977.1	-13.0	71	s.	4.0	1,774	816.9	1.0	-2.14	72	4.73	wsnw.	13.9	1,739	4,100	9/10 Cl., nw.	
						1,750	819.7	0.5		73	4.62	wsnw.	14.0	1,715	4,050		
						1,500	846.0	-4.8		74	3.02	wsnw.	14.6	1,470	3,470		
						1,250	873.1	-10.2		75	1.91	sw.	15.3	1,225	2,890		
5.07	977.0	-13.6	74	s.	4.0	1,213	876.9	-11.0	-2.53	76	1.80	sw.	15.4	1,189	2,800		
						1,000	901.7	-16.4		72	1.04	ssw.	15.5	980	1,920		
5.11	976.9	-13.7	80	s.	4.0	972	904.9	-17.1	0.33	72	0.97	ssw.	15.6	953	1,820		
						750	931.9	-16.4		72	1.04	s.	12.7	735	910		
5.17	976.9	-13.8	78	s.	4.0	666	942.6	-16.1	0.85	72	1.07	sse.	11.6	653	565		
						500	963.2	-14.7		76	1.29	s.	6.9	490	220		
5.20	976.9	-13.8	78	s.	4.0	396	976.9	-13.8		78	1.44	s.	4.0	388			

February 8, 1916 (No. 1).

A. M.																	
8:39	963.7	- 9.5	97	ssw.	8.0	396	963.7	- 9.5		97	2.63	ssw.	8.0	388			3/10 St.Cl., n.
						500	951.0	- 8.1				sw.	8.8	490	260		
						750	921.3	- 4.8				wsnw.	10.6	735	890		
8:47	963.6	- 8.6	94	ssw.	8.5	806	914.3	- 4.0	-1.34			w.	11.0	790	1,000		
						1,000	892.4	- 1.3				w.	12.8	980	1,550		
						1,250	864.6	2.2				wnw.	15.2	1,225	2,260		
8:55	963.4	- 8.1	91	ssw.	7.6	1,269	862.9	2.5	-1.40			wnw.	15.4	1,244	2,320		
9:00	963.4	- 8.0	88	ssw.	7.2	1,319	857.6	1.2	2.60			nnw.	15.4	1,293	2,450		
						1,500	838.1	2.0				nnw.	15.8	1,470	2,720		
9:04	963.5	- 7.7	88	ssw.	6.3	1,584	829.9	2.3	-0.42			nnw.	16.0	1,553	2,850		
						1,750	813.0	0.6				nnw.		1,715			Few Cl.St., nw.
9:14	963.7	- 7.2	89	ssw.	5.8	1,787	809.4	0.2	1.03			nnw.		1,751			Kite broke away.

February 8, 1916 (No. 2).

A. M.																
10:32	965.1	- 6.2	87	w.	6.7	396	965.1	- 6.2		87	3.15	w.	6.7	388	Few Cl.St., nw.	
						500	952.2	- 6.6		84	2.94	w.	8.6	490	120	
						750	922.2	- 7.7		76	2.42	wnw.	13.1	735	380	
10:39	965.2	- 5.6	85	w.	6.3	756	921.8	- 7.7	0.42	76	2.42	wnw.	13.2	741	380	
10:47	965.4	- 4.3	77	w.	7.2	815	915.0	- 1.7	-10.17	86	4.56	nw.	14.3	799	420	
						1,000	893.8	2.1		85	6.04	nw.	14.2	980	540	
10:50	965.4	- 4.1	77	w.	6.3	1,046	889.1	3.1	-2.08	85	6.49	nw.	14.2	1,025	565	Cloudless.
10:59	965.6	- 3.2	76	w.	4.5	1,185	874.4	3.3	-0.14	84	6.50	nnw.	14.3	1,162	700	
						1,250	866.3	2.9		83	6.25	nnw.	14.6	1,225	760	
						1,500	840.1	1.6		79	5.42	nw.	16.0	1,470	1,000	
11:09	965.7	- 2.5	72	wsnw.	4.0	1,565	834.4	1.2	0.55	78	5.19	nw.	16.3	1,534	1,060	
						1,750	814.7	0.8		77	4.98	nw.	17.0	1,715	1,240	
						2,000	789.9	- 0.7		75	4.32	nw.	19.8	1,960	1,460	
11:19	965.9	- 2.3	72	wsnw.	3.6	2,236	767.5	- 1.8	0.64	74	3.89	nw.	21.7	2,191	1,570	
						2,250	765.7	- 1.8		73	3.84	nw.	21.5	2,205	1,580	
11:53	966.4	- 2.4	81	w.	3.1	2,496	743.0	- 2.4	0.23	62	3.10	wnw.	18.6	2,446	1,690	Few Cl.St., wnw.
						2,750	719.1	- 4.6		61	2.53	wnw.	19.5	2,694	1,800	
						3,000	696.4	- 6.8		61	2.10	nw.	20.3	2,939	1,960	
P. M.																
12:20	966.3	- 1.4	79	nw.	3.1	3,086	689.0	- 7.5	0.86	60	1.94	nw.	20.6	3,023	2,120	
						3,250	674.7	- 8.8		62	1.79	nw.	21.6	3,184	2,450	
						3,500	653.2	-10.8		66	1.60	wnw.	23.1	3,429	2,950	
12:47	965.9	- 1.0	76	nnw.	3.6	3,722	634.6	-12.6	0.80	69	1.41	wnw.	24.5	3,646	3,390	
						3,750	632.2	-12.5		69	1.43	wnw.	24.8	3,673	3,450	
						4,000	611.7	-11.7		65	1.45	wnw.	27.2	3,918	3,950	
12:59	965.8	- 0.8	76	nnw.	3.6	4,029	609.6	-11.6	-0.33	65	1.46	wnw.	27.5	3,946	4,000	Few Cl., wnw. Pressure pen failed to record during descent.

February 9, 1916 (No. 1).

A. M.																	
8:46	978.6	-10.8	93	n.	7.2	396	978.6	-10.8		93	2.25	n.	7.2	388			Cloudless.
						500	965.3	-11.5		90	2.04	n.	9.5	490	0		
8:47	978.6	-10.8	92	n.	7.2	596	953.4	-12.2	0.70	88	1.87	n.	11.6	554	0		
						750	934.8	-11.6		92	2.07	n.	15.0	735	0		
8:54	978.8	-10.7	90	n.	7.6	810	927.3	-11.3	-0.42	93	2.15	n.	16.3	794	0		
						1,000	905.1	-3.5		86	3.92	n.	16.3	980	460		
8:59	979.0	-10.6	90	n.	6.3	1,177	885.4	3.8	-4.11	80	6.42	n.	16.3	1,154	890	3/10 Cl., nw.	
9:01	979.1	-10.5	90	n.	5.8	1,216	881.4	3.3	1.28	67	5.19	nnw.	15.8	1,192	950		
						1,250	877.6	3.5		66	5.18	nnw.	15.9	1,225	1,020		
9:08	979.2	-10.5	90	n.	6.3	1,326	869.5	3.8	-0.45	65	5.21	nnw.	16.2	1,300	1,080		
						1,500	851.1	2.5		60	4.39	nnw.	16.3	1,470	1,240		
9:15	979.4	-10.5	90	n.	6.3	1,578	843.0	1.9	0.75	58	4.07	nnw.	16.3	1,547	1,300		
						1,750	825.4	0.7		58	3.73	nnw.	15.4	1,715	1,420		
						2,000	800.7	-1.2		58	3.21	nw.	14.2	1,960	1,580	Solar halo and parhelia.	
9:30	979.9	-10.3	90	nnw.	7.2	2,033	797.0	-1.4	0.73	58	3.16	nw.	14.0	1,992	1,600		
						2,250	775.9	-3.4		59	2.71	nw.	12.6	2,205	2,100		
9:48	980.4	-10.1	88	n.	7.6	2,443	757.0	-5.2	0.93	59	2.32	nw.	11.7	2,394	2,360	3/10 Cl., nw.	
						2,600	751.3	-5.6		60	2.29	nw.	12.1	2,450	2,460		
						2,750	728.0	-7.4		64	2.09	nw.	13.7	2,694	3,240		

## OBSERVATIONS AT DREXEL, FEBRUARY, 1916.

27

TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Continued.

February 9, 1916 (No. 1)—Continued.

Surface.						At different heights above sea.												Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.				
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.			
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.			
10:13.....	980.9	-10.0	87	n.	8.5	3,000	704.8	-9.3		69	1.90	nw.	15.3	2,939	3,930			
						3,129	693.3	-10.3	0.74	71	1.80	nw.	16.1	3,065	4,200			
						3,250	681.9	-10.8		69	1.67	nw.	16.6	3,184	4,450			
						3,500	659.8	-11.8		65	1.44	nw.	17.6	3,429	4,970			
						3,750	638.9	-12.9		61	1.22	wnw.	18.7	3,673	5,490			
10:40.....	981.2	-10.0	85	n.	7.2	4,000	618.5	-13.9		57	1.04	wnw.	19.7	3,918	6,000			
						4,142	607.6	-14.6	0.46	54	0.92	wnw.	20.4	4,057	6,300			
						4,000	618.5	-13.9		53	0.97	wnw.	19.8	3,918	5,980			
						3,750	638.9	-12.6		52	1.07	wnw.	18.6	3,673	5,430			
						3,500	659.8	-11.4		51	1.17	wnw.	17.5	3,429	4,880			
11:15.....	981.6	-9.7	81	n.	6.7	3,250	681.9	-10.2		50	1.28	wnw.	16.4	3,184	4,320			
						3,154	690.9	-9.6	0.75	49	1.32	wnw.	16.0	3,090	4,100	7/10 Cl., wnw.		
						3,000	704.8	-8.4		51	1.52	wnw.	15.4	2,939	3,740			
						2,750	728.0	-6.6		54	1.89	wnw.	14.4	2,694	3,220			
						2,500	751.3	-4.7		56	2.31	nw.	13.5	2,450	2,920			
						2,250	775.9	-2.8		58	2.81	nw.	12.6	2,205	2,620			
11:40.....	981.9	-9.7	84	n.	4.9	2,155	785.3	-2.1	0.66	59	3.03	nw.	12.2	2,112	2,500			
						2,000	800.7	-1.1		59	3.29	nw.	12.4	1,990	2,230			
11:46.....	981.9	-9.4	81	n.	4.5	1,793	821.9	0.3	-1.09	59	3.68	nw.	12.6	1,757	1,860			
						1,750	826.1	-0.2		58	3.49	nw.	12.6	1,715	1,780			
11:47.....	982.0	-9.4	81	n.	4.5	1,727	828.6	-0.4	0.42	58	3.43	nw.	12.6	1,693	1,740			
						1,500	852.2	0.5		57	3.61	n.	11.2	1,470	1,330			
11:56.....	982.0	-9.6	84	n.	3.6	1,257	878.8	1.5	-5.94	56	3.81	n.	9.7	1,232	1,100			
						1,250	879.3	1.1		56	3.71	n.	9.7	1,225	1,090			
Noon.....	982.1	-9.6	82	n.	4.5	1,161	889.4	-4.2	-1.80	58	2.49	n.	9.7	1,138	1,010	7/10 Cl., nw.		
						1,000	907.7	-7.1		63	2.11	n.	8.6	980	840			
						750	937.7	-11.6		72	1.62	nne.	6.8	735	565			
P. M.																		
12:12.....	982.0	-9.5	84	n.	4.9	645	950.6	-13.5	1.57	75	1.42	nne.	6.1	632	410			
						500	968.5	-11.2		80	1.86	nne.	5.4	490	180			
12:15.....	981.9	-9.6	84	nne.	4.9	396	981.9	-9.6		84	2.26	nne.	4.9	388				

February 9, 1916 (No. 2).

P. M.															
1:04.....	981.4	-9.4	78	n.	4.0	396	981.4	-9.4	78	2.14	n.	4.0	388	.....	5/10 Cl., nw.
						500	968.0	-10.6	81	1.99	n.	5.0	490	0	Solar halo.
1:35.....	981.2	-9.2	78	n.	3.6	717	941.1	-13.2	86	1.68	nne.	7.2	703	0	
						750	937.0	-12.4	85	1.78	nne.	7.3	735	70	
2:01.....	981.0	-9.2	81	nne.	3.6	1,000	907.2	-8.7	79	2.74	nne.	7.7	940	550	
						1,021	904.4	-6.2	79	2.86	nne.	7.7	1,001	590	8/10 Cl., nw.
2:20.....	981.1	-9.2	81	n.	3.1	1,250	879.0	-0.6	72	4.18	n.	5.7	1,225	.....	
						1,310	872.4	0.9	70	4.56	nnw.	5.2	1,284	.....	
2:29.....	981.2	-9.2	81	n.	2.2	1,250	879.0	-0.7	70	4.03	nnw.	5.5	1,225	.....	
						1,002	907.0	-7.1	71	2.38	n.	6.7	982	0	
2:32.....	981.2	-9.2	81	n.	2.2	750	937.0	-10.5	73	1.81	n.	5.2	735	0	
						639	950.7	-12.0	74	1.61	n.	4.5	626	0	
2:33.....	981.2	-9.2	81	n.	2.2	500	968.0	-11.1	76	1.79	n.	4.5	490	0	
						485	970.0	-11.0	76	1.80	n.	4.5	475	0	
2:44.....	981.3	-9.2	81	n.	2.7	396	981.3	-9.2	81	2.26	n.	2.7	388	.....	10/10 Cl., nw.

February 10, 1916.

P. M.														
1:23.....	979.0	-5.2	86	ene.	5.4	396	979.0	-5.2	86	3.30	ene.	5.4	388	9/10 St.Cu., ene.
						500	956.1	-6.3			ene.	5.6	490	150
						750	935.4	-8.8			e.	6.2	735	890
1:50.....	978.6	-5.0	86	ene.	6.3	901	917.1	-10.3	1.01		e.	6.6	883	1,750
						1,000	903.4	-5.8			se.	6.2	960	2,720
3:50.....	977.0	-3.6	71	e.	5.8	1,199	851.8	3.3	-4.56		sw.	5.3	1,175	2,300
						1,250	876.1	3.8			sw.	5.8	1,225	1,950
4:12.....	976.9	-4.6	76	e.	5.4	1,377	862.7	4.9	-0.79		sw.	7.2	1,350	1,100
						1,250	876.1	4.0			sw.	8.5	1,225	970
4:13.....	976.9	-4.7	76	e.	5.4	1,215	880.0	3.8	-4.63		s.	8.9	1,191	930
						1,000	904.0	-6.2			sse.	6.7	980	680
4:17.....	976.8	-5.1	78	e.	4.0	932	911.8	-8.3	0.69		se.	6.0	914	600
						750	933.2	-8.0			ese.	5.5	735	400
						500	953.5	-6.3			e.	4.8	490	120
4:25.....	976.8	-5.6	83	ene.	4.5	396	976.8	-5.6	83	3.16	ene.	4.5	388	7/10 Cl., nw.; 3/10 A.St., nw.

February 11, 1916.

P. M.																	
1:45.....	970.2	-4.8	100	ne.	2.7	396	970.2	-4.8	.....	100	4.08	ne.	2.7	388	.....	Dense fog, ne.	
						500	957.3	-5.5	.....	100	3.84		4.1	490	.....	Altitude of fog base about 450 m.	
2:09.....	970.0	-4.7	100	ne.	3.1	653	911.1	-6.4	0.68	100	3.56	.....	5.9	621	360	Snowing from 2:07 to 3:10 p. m.	
						750	927.4	-4.7	.....	100	4.12	.....		735	670		
3:18.....	970.2	-4.3	100	ne.	4.0	957	903.4	-1.7	-1.44	100	5.30	e.		938	.....	Rain began 3:10 p. m.	
						750	927.4	-4.7	.....	100	4.12	ene.		735	1,450		
3:31.....	970.3	-4.1	100	ne.	3.1	651	939.3	-6.1	0.78	100	3.65	ne.		638	1,050	Wire covered with ice.	
						500	957.3	-4.9	.....	100	4.05	ne.		490	440		
3:40.....	970.4	-4.1	100	ne.	2.7	396	970.4	-4.1	.....	100	4.33	ne.	2.7	388	.....	Dense fog, ne.	



TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Continued.

February 12, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Relative humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
P. M.	mb.	° C.	%	n.	m. p. s.	m.	mb.	° C.		%	mb.	n.	m. p. s.	10 <sup>6</sup> ergs.	volts.	
1:15	984.2	- 9.8	93	n.	6.3	396	984.2	- 9.8		93	2.46	n.	6.3	388	-----	10/10 St., nw.
						500	970.8	-10.8		95	2.30	n.	7.8	490	140	Snow flurries.
						750	939.4	-13.3		99	1.91	n.	11.5	735	480	Altitude of St. base =1,050 m.
1:20	984.2	- 9.7	93	n.	6.3	791	934.9	-13.7	0.99	100	1.86	n.	12.1	776	515	
1:27	984.3	- 9.6	94	nnw.	6.7	981	911.7	-14.4	0.78	100	1.74	nnw.	13.5	962	920	
						1,000	909.5	-14.2		100	1.78	nnw.	13.5	980	960	
1:31	984.3	- 9.4	94	nnw.	5.8	1,207	885.3	-11.6	-1.24	100	2.25	n.	13.2	1,183	1,400	
						1,250	880.2	-11.8		100	2.21	n.	13.5	1,225	1,510	
						1,500	852.0	-13.2		100	1.95	nnw.	15.4	1,470	2,130	
1:43	984.4	- 9.8	96	nnw.	5.8	1,527	849.0	-13.3	0.53	100	1.93	nnw.	15.6	1,497	2,200	
1:44	984.4	- 9.9	96	nnw.	5.8	1,620	838.8	-6.2	-7.63	100	3.62	nnw.	15.6	1,588	2,320	
						1,750	825.0	-5.9		99	3.67	nnw.	15.5	1,715	2,500	
1:49	984.4	- 9.8	93	nnw.	8.0	1,975	801.8	-5.5	-0.20	98	3.76	nnw.	15.4	1,936	2,800	1/10 Cl.St., nw.; 9/10 St.Cu., n.
						2,000	799.0	-5.7		98	3.70	nnw.	15.5	1,960	2,820	
						2,250	774.0	-7.5		94	3.04	nnw.	16.5	2,205	3,030	
						2,500	749.3	-9.3		90	2.48	nnw.	17.5	2,450	2,920	
2:35	984.7	- 9.6	90	n.	8.0	2,621	737.9	-10.2	0.73	88	2.24	nnw.	18.0	2,568	2,800	
						2,750	725.5	-10.9		85	2.03	nnw.	18.5	2,694	3,100	
						3,000	702.2	-12.3		80	1.69	nw.	19.6	2,939	3,760	
						3,250	679.4	-13.7		74	1.38	nw.	20.6	3,184	4,390	
2:53	984.8	- 9.7	88	n.	6.7	3,359	670.1	-14.3	0.56	71	1.25	nw.	21.1	3,291	4,720	4/10 Cl., nw.; 5/10 St.Cu., n.
						3,500	657.4	-15.0		69	1.14	nw.	20.5	3,429	5,030	
						3,750	636.5	-16.4		65	0.94	nw.	19.5	3,673	5,390	
						4,000	615.4	-17.7		61	0.78	nw.	18.5	3,918	5,630	
3:18	984.9	- 9.7	89	n.	6.3	4,076	609.4	-18.1	0.54	60	0.74	nw.	18.2	3,992	5,700	
						4,000	615.4	-17.7		60	0.77	nw.	18.1	3,918	5,580	
						3,750	636.5	-16.4		61	0.88	nw.	18.0	3,673	5,190	
						3,500	657.4	-15.0		62	1.02	nw.	17.9	3,429	4,800	
						3,250	679.4	-13.6		63	1.18	nnw.	17.8	3,184	4,440	
3:54	985.2	-10.2	93	nw.	7.6	3,000	702.2	-12.2		64	1.36	nnw.	17.7	2,939	3,800	Snow flurries ended.
						2,826	718.7	-11.3	0.72	64	1.48	nnw.	17.6	2,769	3,340	1/10 Cl., nw.; 4/10 St.Cu., nnw.
						2,750	725.5	-10.8		63	1.52	nnw.	17.8	2,694	3,230	
						2,500	749.3	-9.0		60	1.70	nnw.	18.3	2,450	2,930	
						2,250	774.0	-7.2		56	1.86	n.	18.8	2,205	2,640	
						2,000	799.0	-5.4		52	2.02	n.	19.3	1,930	2,340	
4:12	985.3	-10.5	90	n.	6.3	1,976	801.8	-5.2	-0.03	52	2.05	n.	19.3	1,937	2,310	
						1,750	825.0	-5.3		51	1.99	n.	17.8	1,715	2,040	
4:20	985.4	-10.8	92	n.	7.2	1,621	838.8	-5.3	-8.80	51	1.99	n.	17.0	1,589	1,890	
4:24	985.4	-11.0	92	n.	7.2	1,513	850.7	-14.8	0.17	56	0.94	n.	12.8	1,483	1,780	
						1,500	852.0	-14.8		57	0.95	n.	12.8	1,470	1,740	
						1,250	880.7	-14.3		68	1.20	n.	13.7	1,225	1,450	
4:32	985.5	-10.9	91	nnw.	7.2	1,166	890.6	-14.2	-0.67	72	1.25	n.	14.0	1,145	1,350	
						1,000	910.0	-15.3		73	1.17	nnw.	14.0	980	680	
4:34	985.5	-11.0	92	n.	7.6	988	911.7	-15.4	0.43	73	1.16	nnw.	14.0	969	640	2/10 St.Cu., nnw.
4:39	985.6	-11.0	90	n.	8.5	827	931.4	-14.7	0.86	80	1.36	nnw.	12.1	811	0	
						750	940.3	-14.0		82	1.48	nnw.	11.5	735	0	
						500	972.1	-11.9		90	1.97	nnw.	9.4	490	0	
4:43	985.6	-11.0	93	nnw.	8.5	396	985.6	-11.0		93	2.20	nnw.	8.5	388	-----	

February 14, 1916, series (No. 1).

A. M.															
9:27	981.6	-10.0	96	SSW.	12.1	396	981.6	-10.0		96	2.50	SSW.	12.1	388	4/10 Cl, nnw.; 6/10 Cl St nnw
9:30	981.6	- 9.8	94	SSW.	11.6	500	968.5	-10.3		97	2.45	SSW.	14.3	490	560
						681	945.9	-10.8	0.28	98	2.37	sw.	18.1	668	1,450
9:35	981.6	- 9.7	93	SSW.	11.6	750	937.7	- 6.0		94	3.46	sw.	21.6	735	1,780
						757	936.8	- 5.5	-6.97	94	3.61	sw.	22.0	742	1,800
9:45	981.5	- 9.5	94	SSW.	11.2	1,000	907.9	- 1.6		85	4.55	WSW.	18.7	980	2,660
						1,128	893.8	0.4	-1.50	81	5.09	WSW.	17.0	1,106	3,100
						1,250	879.9	1.4		75	5.07	WSW.	16.7	1,225	3,330
						1,500	853.2	3.3		62	4.80	WSW.	16.2	1,470	3,700
10:00	981.4	- 8.9	92	SSW.	11.2	1,667	836.3	4.6	-0.78	53	4.49	WSW.	15.8	1,634	4,050
						1,750	827.4	4.1		50	4.10	WSW.	15.8	1,715	4,290
10:02	981.4	- 8.8	91	SSW.	11.2	1,816	821.0	3.7	0.60	48	3.82	WSW.	15.8	1,780	4,420
10:06	981.3	- 8.6	88	SSW	11.6	1,952	807.5	5.9	-1.62	40	3.72	WSW	16.0	1,913	4,760
						2,000	802.2	5.9		36	3.34	WSW.	14.1	1,960	4,890
10:23	981.2	- 7.8	82	SSW.	12.1	2,088	794.1	5.9	0.00	29	2.69	w.	10.6	2,046	5,100
						2,250	777.7	4.9		29	2.51	w.	10.2	2,205	5,250
						2,500	754.2	3.5		28	2.20	w.	9.7	2,450	5,920
11:15	980.6	- 5.7	85	SSW.	11.6	2,610	744.5	2.8	0.59	28	2.09	w.	9.4	2,557	
						2,750	731.4	2.1		28	1.99	w.	10.0	2,694	
11:31	980.4	- 5.3	82	SSW.	13.0	3,003	709.1	0.8	0.54	28	1.81	w.	11.2	2,942	
						2,750	731.4	2.2		28	2.00	w.	10.4	2,694	
11:43	980.3	- 5.1	82	SSW.	13.4	2,614	744.5	3.0	0.68	28	2.12	w.	9.9	2,561	
						2,500	754.2	3.8		28	2.25	w.	11.4	2,450	
11:57	980.1	- 4.7	84	sw.	12.5	2,277	775.7	5.3	0.60	28	2.49	w.	14.3	2,231	3,700
						2,250	777.7	5.5		28	2.53	w.	14.3	2,205	3,660
						2,000	802.2	7.0		28	2.81	w.	14.0	1,960	3,250
P. M.															
12:04	980.1	- 4.7	81	sw.	11.2	1,763	826.1	8.4	-1.25	28	3.09	w.	13.8	1,728	2,860
						1,750	827.4	8.2		28	3.04	w.	13.9	1,715	2,850
						1,500	853.2	5.1		28	2.46	WSW.	10.7	1,470	2,380
12:14	980.1	- 4.6	81	sw.	13.4	1,314	872.7	2.8	0.35	28	2.09	WSW.	18.7	1,288	2,000
						1,250	879.6	3.0		30	2.27	WSW.	17.4	1,225	1,900
12:21	980.0	- 4.2	80	sw.	10.7	1,687	807.3	3.6	-5.81	34	2.69	WSW.	14.0	1,066	1,540
						1,000	907.2	- 1.5		38	2.05	WSW.	13.5	980	1,510
12:33	980.0	- 4.0	77	sw.	8.9	870	922.3	- 9.0	1.10	43	1.22	sw.	13.2	853	1,300
						750	936.3	- 7.7		53	1.69	sw.	12.7	735	980
						500	966.8	- 4.9		73	2.96	sw.	11.6	490	300
2:32	979.9	- 3.8	82	sw.	11.2	396	970.9	- 3.8		82	3.64	sw.	11.2	388	3/10 Cl.St., nw.; few Cu. sw.

## OBSERVATIONS AT DREXEL, FEBRUARY, 1916.

29

TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Continued.

February 14, 1916, series (No. 2).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temp- era- ture.	Rela- tive humid- ity.	Wind.		Altitude.	Pressure.	Temp- era- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
P. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>8</sup> ergs.	volts.	
1:13.....	979.6	-3.0	80	ssw.	11.2	396	979.6	-3.0	.....	80	3.80	ssw.	11.2	388	.....	3/10 Cl.St., nw.; few Cu., sw.
.....	.....	.....	.....	.....	.....	500	986.3	-4.1	.....	83	3.59	ssw.	11.4	400	200	.....
.....	.....	.....	.....	.....	.....	750	936.2	-6.7	.....	91	3.16	ssw.	11.9	735	680	.....
1:23.....	979.5	-2.7	80	ssw.	11.2	829	927.0	-7.5	1.04	93	3.00	ssw.	12.1	813	1,010	.....
.....	.....	.....	.....	.....	.....	1,000	906.8	-2.9	.....	77	3.70	sw.	15.8	980	1,300	.....
1:33.....	979.4	-2.8	80	sw.	8.0	1,250	878.9	3.7	.....	53	4.22	sw.	21.2	1,225	1,700	.....
.....	.....	.....	.....	.....	.....	1,317	872.0	5.5	-2.66	47	4.24	wsaw.	22.6	1,291	1,800	.....
.....	.....	.....	.....	.....	.....	1,500	852.1	7.1	.....	38	3.83	w.	16.8	1,470	2,120	.....
1:43.....	979.3	-2.4	79	sw.	10.2	1,616	840.8	8.1	-0.87	32	3.46	w.	13.2	1,584	2,300	.....
.....	.....	.....	.....	.....	.....	1,750	826.5	7.7	.....	31	3.26	w.	13.0	1,715	2,330	.....
1:57.....	979.2	-2.0	74	sw.	8.5	2,000	802.1	6.8	.....	30	2.96	wnw.	12.7	1,960	2,380	.....
.....	.....	.....	.....	.....	.....	2,126	790.2	6.4	0.33	29	2.79	wnw.	12.6	2,063	2,400	.....
.....	.....	.....	.....	.....	.....	2,280	778.2	5.3	.....	28	2.49	nw.	13.2	2,205	2,530	.....
2:14.....	979.0	-2.0	75	sw.	10.7	2,500	754.7	3.0	.....	27	2.05	nw.	14.6	2,450	2,780	.....
.....	.....	.....	.....	.....	.....	2,527	752.2	2.8	0.90	27	2.02	nw.	14.7	2,476	2,800	.....
.....	.....	.....	.....	.....	.....	2,750	731.8	1.1	.....	25	1.66	nw.	14.9	2,604	3,120	.....
.....	.....	.....	.....	.....	.....	3,000	709.0	-0.8	.....	23	1.31	wnw.	15.0	2,939	3,470	.....
2:52.....	978.3	-1.8	75	sw.	9.4	3,252	686.4	-2.7	0.84	21	1.02	wnw.	15.2	3,186	.....	.....
.....	.....	.....	.....	.....	.....	3,000	709.0	-0.4	.....	21	1.24	wnw.	14.3	2,939	.....	.....
.....	.....	.....	.....	.....	.....	2,750	731.8	1.9	.....	21	1.47	wnw.	13.4	2,694	.....	.....
3:03.....	978.2	-1.6	75	sw.	9.8	2,693	735.9	2.4	0.36	21	1.52	wnw.	13.2	2,639	2,800	.....
.....	.....	.....	.....	.....	.....	2,500	754.7	3.1	.....	21	1.60	wnw.	13.5	2,450	2,340	.....
3:15.....	978.3	-1.4	76	sw.	8.9	2,359	767.0	3.6	0.47	21	1.66	wnw.	13.8	2,312	2,000	.....
.....	.....	.....	.....	.....	.....	2,250	778.2	4.1	.....	23	1.88	wnw.	13.9	2,205	1,910	.....
3:30.....	978.4	-1.2	76	sw.	8.0	2,000	802.1	5.3	.....	28	2.49	nw.	14.1	1,960	1,720	.....
.....	.....	.....	.....	.....	.....	1,763	825.5	6.4	0.23	33	3.17	nw.	14.3	1,728	1,520	.....
.....	.....	.....	.....	.....	.....	1,750	826.5	6.4	.....	33	3.17	nw.	14.2	1,715	1,520	.....
3:38.....	978.4	-1.1	78	sw.	7.1	1,500	852.1	7.0	.....	39	3.91	wnw.	11.4	1,470	1,170	.....
.....	.....	.....	.....	.....	.....	1,411	861.6	7.2	-1.85	41	4.17	wnw.	10.4	1,383	1,040	.....
3:46.....	978.5	-1.0	78	sw.	8.5	1,250	878.9	4.2	.....	41	3.38	w.	10.8	1,225	800	.....
.....	.....	.....	.....	.....	.....	1,184	886.0	3.0	-2.52	41	3.11	w.	11.0	1,161	705	.....
.....	.....	.....	.....	.....	.....	1,000	906.8	-1.6	.....	44	2.35	wsaw.	10.9	980	340	.....
3:50.....	978.5	-1.1	78	sw.	8.0	854	923.4	-5.3	0.94	47	1.84	sw.	10.9	837	30	.....
.....	.....	.....	.....	.....	.....	750	936.2	-4.3	.....	54	2.30	sw.	10.0	735	0	.....
.....	.....	.....	.....	.....	.....	500	966.3	-2.0	.....	71	3.67	sw.	8.0	490	0	.....
4:00.....	978.6	-1.0	78	sw.	7.1	396	978.6	-1.0	.....	78	4.38	sw.	7.1	388	.....	2/10 Cl., nw.; 2/10 Cl.Cu., nw.

February 14, 1916, series (No. 3).

P. M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Continued.

February 14, 1916, series (No. 4).

Surface.						At different heights above sea.												Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		Grav- ity.	Elec- tric.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.					
P. M.	mb.	° C.	%	sw.	m. p. s.	m.	mb.	° C.		%	mb.	sw.	m. p. s.	10 <sup>6</sup> ergs.	volts.			
8:02	979.0	-3.1	89	sw.	6.3	396	979.0	-3.1		89	4.19	sw.	6.3	388		Few Cl., nw.		
8:06	979.0	-3.0	88	sw.	6.3	500	996.0	-1.8		89	4.68	wsnw.	7.9	490				
8:12	979.1	-3.1	88	sw.	6.3	714	940.8	0.8	-1.23	88	5.69	w.	11.2	700	0			
8:35	979.2	-3.4	90	sw.	5.4	750	933.3	0.6		88	5.61	w.	11.4	735	0			
8:42	979.1	-3.1	88	sw.	6.3	1,000	907.8	-0.4		88	5.20	wnw.	13.0	980	150			
8:58	979.3	-3.8	91	sw.	5.8	1,042	904.9	-0.6	0.44	88	5.11	wnw.	13.2	1,012	170			
9:20	979.3	-4.2	92	sw.	5.8	1,250	890.3	0.3		86	5.37	nw.	10.7	1,225	330			
9:35	979.4	-4.4	93	sw.	5.4	1,427	861.0	1.1	-0.43	84	5.55	nw.	8.7	1,399	0			
9:45	979.4	-4.5	94	sw.	4.0	1,500	853.7	1.6		82	5.63	nw.	8.5	1,470	100	Cloudless.		
9:59	979.4	-4.7	96	sw.	3.6	1,750	827.3	3.4		74	5.77	nw.	7.8	1,715	350			
10:10	979.4	-5.0	98	sw.	3.1	1,941	808.0	4.7	-0.70	68	5.81	nw.	7.2	1,902	500			
10:23	979.5	-5.1	98	sw.	3.6	2,000	802.0	4.4		65	5.44	nw.	7.7	1,990	540			
10:27	979.5	-5.2	98	sw.	3.6	2,250	777.0	2.9		51	3.84	nw.	10.0	2,205	730			
10:31	979.5	-5.1	98	sw.	3.6	2,299	772.9	2.6	0.59	48	3.54	nw.	10.5	2,253	770			
10:36	979.5	-4.8	98	wsnw.	3.6	2,500	752.9	1.2		50	3.33	nw.	10.3	2,450	920			
10:46	979.6	-4.4	97	w.	4.0	2,750	730.0	-0.6		54	3.14	nw.	10.1	2,694	1,110			
10:49	979.6	-4.4	98	w.	4.0	2,949	712.9	-2.0	0.71	56	2.90	nw.	9.9	2,880	1,250			
						3,000	708.2	-2.4		59	2.95	nw.	10.3	2,939				
						3,250	686.7	-4.3		71	3.02	nw.	12.1	3,184				
						3,403	673.5	-5.4	0.73	79	3.07	nw.	13.2	3,334				
						3,500	666.7	-4.3		77	3.28	nw.	13.0	3,184				
						3,000	708.8	-2.5		74	3.67	nw.	12.7	2,939				
						2,885	719.3	-1.7	0.76	72	3.82	nw.	12.6	2,827	1,100			
						2,750	731.4	-0.7		69	3.97	nw.	12.7	2,694	980			
						2,500	754.3	1.2		64	4.26	nw.	13.0	2,450	790			
						2,323	771.3	2.6	0.47	60	4.42	nw.	13.2	2,276	600			
						2,250	778.3	2.9		59	4.44	nw.	13.1	2,205	550			
						2,000	803.1	4.1		54	4.42	nw.	12.7	1,990	490			
						1,750	828.0	5.3		50	4.45	nw.	12.3	1,715	250			
						1,628	840.2	5.9	0.03	48	4.45	nw.	12.1	1,594	170			
						1,500	853.7	5.9		48	4.45	nw.	11.5	1,470	120			
						1,313	873.1	6.0	-3.33	47	4.39	nw.	10.6	1,287	50			
						1,250	880.3	3.9		47	3.80	nw.	10.3	1,225	10			
						1,194	887.1	1.7	-1.63	48	3.32	nw.	9.9	1,161	0			
						1,000	907.8	-1.3		56	3.07	nw.	9.6	980	0			
						994	908.5	-1.4	0.00	56	3.05	nw.	9.0	975	0			
						750	936.3	-1.4		76	4.13	nw.	9.2	735	0			
						550	960.9	-1.4	-1.95	93	5.06	nw.	9.3	539	0			
						500	968.5	-2.4		95	4.75	wnw.	7.6	490	0			
						395	979.6	-4.4		98	4.14	w.	4.0	388		Cloudless.		

February 14-15, 1916, series (No. 5).

P. M.																	
11:27	979.6	-4.5	98	nw.	4.5	396	979.6	-4.5		98	4.11	nw.	4.5	388		Cloudless.	
						500	966.5	-3.3		99	4.59	nw.	5.5	490	0		
11:28	979.6	-4.5	98	nw.	4.5	558	959.8	-2.6	-1.17	100	4.92	nw.	6.1	547	0		
						750	916.8	-2.6		97	4.77	nw.	7.9	735	0		
11:38	979.7	-4.6	98	nw.	4.5	850	935.2	-2.6	0.00	95	4.67	nw.	8.9	833	0		
						1,000	917.8	0.1		88	5.41	nw.	9.9	980	0		
11:46	979.7	-4.7	98	nw.	4.5	1,198	895.0	3.6	-1.78	78	6.17	nw.	9.9	1,174	0		
						1,250	880.2	3.9		75	6.06	nw.	10.5	1,225	40		
11:53	979.7	-4.4	97	nw.	5.4	1,490	854.7	5.4	-0.62	61	5.47	nnw.	13.2	1,461	190		
						1,500	853.3	5.4		61	5.47	nnw.	13.1	1,470	200		
						1,750	827.8	5.4		51	4.57	nnw.	11.3	1,715	350		
A. M.																	
12:07	979.7	-4.3	94	nnw.	4.5	1,942	808.6	5.4	0.00	43	3.86	nnw.	9.9	1,903	470		
						2,000	802.7	5.0		43	3.75	nnw.	10.0	1,960	510		
						2,250	778.3	3.4		44	3.43	n.	10.4	2,205	870		
						2,500	754.6	1.9		45	3.15	n.	10.9	2,450	1,270		
12:30	979.7	-4.6	95	nnw.	4.5	2,529	752.2	1.7	0.63	45	3.11	n.	11.0	2,478	1,300		
						2,750	731.6	0.4		48	3.02	n.	11.8	2,694	1,480		
						3,000	708.9	-1.1		52	2.90	n.	12.7	2,939	1,650		
						3,250	687.0	-2.6		55	2.71	n.	13.6	3,184	1,880		
						3,500	665.4	-4.1		59	2.55	n.	14.5	3,429			
1:19	979.8	-5.4	92	nnw.	4.0	3,570	659.9	-4.5	0.57	60	2.51	n.	14.7	3,497		Cloudless.	
						3,500	665.4	-4.1		60	2.60	n.	14.6	3,429			
						3,250	687.0	-2.8		60	2.90	n.	14.2	3,184			
						3,000	708.9	-1.4		60	3.26	n.	13.8	2,939			
1:45	980.0	-5.7	95	nnw.	3.1	2,772	729.4	-0.2	0.52	60	3.61	n.	13.4	2,716			
						2,750	731.6	-0.1		60	3.64	n.	13.3	2,694			
						2,500	754.6	1.2		59	3.93	n.	12.6	2,450			
						2,250	778.3	2.5		58	4.24	n.	11.9	2,205			
1:59	980.1	-5.9	98	nnw.	4.0	2,180	785.2	2.9	0.51	57	4.29	n.	11.7	2,136	900		
						2,000	802.7	3.8		57	4.57	n.	11.6	1,960	730		
						1,750	827.8	5.1		56	4.92	n.	11.4	1,715	500		
2:10	980.2	-5.8	97	nnw.	4.0	1,589	844.3	5.9	-1.15	56	5.20	n.	11.3	1,557	330		
						1,500	853.3	4.9		57	4.94	n.	12.3	1,470	230		
2:15	980.2	-5.7	96	nnw.	4.0	1,310	873.8	2.7	-1.18	58	4.30	nnw.	14.3	1,284	0		
						1,250	880.6	2.0		59	4.17	nnw.	14.3	1,225	0		
						1,000	908.6	-1.0		65	3.65	nnw.	14.3	990	0		
2:25	980.3	-5.9	98	nnw.	4.5	854	925.2	-2.7	-0.72	68	3.32	nnw.	14.3	837	0		
						750	937.5	-3.4		75	3.45	nnw.	12.2	735	0		
						500	967.6	-5.3		91	3.56	nnw.	7.0	490	0		
2:31	980.4	-6.0	98	nnw.	4.9	395	980.4	-6.0		98	3.61	nnw.	4.9	388		Cloudless.	



## OBSERVATIONS AT DREXEL, FEBRUARY, 1916.

31

TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Continued.

February 15, 1916, series (No. 6).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
3:13.....	980.6	-6.5	98	nnw.	4.0	396	980.6	-6.5	.....	98	3.46	nnw.	4.0	388	.....	Cloudless.
						500	967.5	-5.7	.....	97	3.67	nnw.	6.3	490	0	
						750	937.2	-4.0	.....	94	4.11	n.	11.9	735	0	
3:18.....	980.7	-6.7	98	nnw.	4.0	806	930.9	-3.5	-0.73	93	4.24	n.	13.2	790	0	
						1,000	908.1	-0.7	.....	87	5.01	n.	12.2	980	0	
3:37.....	980.7	-7.0	100	nnw.	3.6	1,220	883.0	2.7	-1.47	79	5.86	n.	11.0	1,205	0	
						1,250	880.3	2.9	.....	78	5.87	n.	10.8	1,225	20	
3:51.....	980.8	-7.2	100	n.	3.6	1,401	855.1	5.8	-1.15	64	5.90	nnw.	9.0	1,462	500	
						1,500	854.0	5.8	.....	64	5.90	nnw.	9.0	1,470	510	
						1,750	828.0	4.6	.....	60	5.09	nnw.	9.8	1,715	730	
4:01.....	980.8	-7.1	100	n.	3.6	2,000	800.1	3.5	.....	57	4.47	n.	10.6	1,960	960	
						2,113	792.2	3.0	0.45	56	4.24	n.	10.9	2,071	1,050	
						2,250	779.0	2.3	.....	56	4.04	n.	11.2	2,205	1,260	
4:25.....	980.8	-7.5	100	nnw.	2.7	2,500	755.2	1.0	.....	56	3.68	n.	11.8	2,450	1,630	
						2,510	754.2	0.9	0.53	56	3.65	n.	11.8	2,460	1,640	
						2,750	732.1	-0.4	.....	56	3.31	n.	12.3	2,694	1,910	
5:30.....	981.0	-8.7	100	n.	3.1	3,000	700.3	-1.8	.....	56	2.95	nnw.	12.9	2,939	2,170	
						3,021	707.4	-1.9	0.55	56	2.92	nnw.	12.9	2,960	2,200	
						3,250	687.7	-1.2	.....	51	2.82	n.	10.6	3,184	.....	
5:33.....	981.1	-8.8	100	nnw.	3.1	3,404	674.3	-0.7	-0.31	48	2.76	n.	9.1	3,335	.....	
5:38.....	981.1	-8.8	100	nnw.	3.1	3,482	668.1	-0.9	0.42	37	2.10	n.	8.0	3,411	.....	
						3,250	687.7	0.5	.....	28	1.77	n.	8.8	3,184	.....	
5:49.....	981.1	-9.2	100	nnw.	2.7	3,243	688.4	0.5	-0.47	28	1.77	n.	8.8	3,177	.....	
						3,090	709.3	-0.7	.....	28	1.61	n.	8.8	2,939	.....	
5:53.....	981.2	-9.2	100	nnw.	2.2	2,863	721.8	-1.3	0.60	28	1.53	n.	8.8	2,805	.....	
						2,750	732.1	-0.6	.....	30	1.74	n.	8.9	2,694	.....	
						2,500	755.2	0.9	.....	35	2.28	n.	9.2	2,450	1,550	
6:14.....	981.4	-9.1	100	nnw.	3.1	2,250	779.0	2.4	.....	40	2.90	nnw.	9.4	2,205	1,260	
						2,134	790.6	3.1	0.86	42	3.20	nnw.	9.5	2,091	1,120	Cloudless.
						2,000	808.3	3.6	.....	43	3.40	nnw.	9.3	1,960	1,070	
						1,750	828.0	4.5	.....	44	3.70	nnw.	9.0	1,715	1,020	
6:29.....	981.6	-9.3	100	nnw.	2.2	1,500	854.6	5.4	.....	46	4.13	n.	8.7	1,470	870	
						1,302	876.0	6.1	-1.93	47	4.43	n.	8.4	1,276	700	Few Cl., nw.
						1,250	881.8	5.1	.....	47	4.13	n.	8.7	1,225	620	
6:42.....	981.8	-9.2	100	n.	2.2	1,000	909.6	0.3	.....	49	3.06	n.	10.1	980	240	
						842	927.4	-2.8	-1.48	50	2.42	n.	11.0	826	0	
						750	938.8	-4.2	.....	60	2.58	n.	9.2	735	0	
6:50.....	982.0	-9.4	100	nw.	2.2	500	969.2	-7.9	.....	88	2.75	nnw.	4.3	490	0	
						396	982.0	-9.4	.....	100	2.74	nw.	2.2	388	.....	Few Cl., nw.

February 15, 1916, series (No. 7).

A. M.															
7:31	982.1	-10.2	100	nw.	4.5	396	982.1	-10.2	100	2.55	nw.	4.5	388	1/10 Cl., nw.	
						500	968.6	-8.0	96	2.98	nnw.	4.7	400	0	
						750	938.5	-2.6	88	4.33	nnw.	5.3	735	0	
7:52	982.1	-9.6	100	nw.	3.6	862	925.6	-0.2	84	5.05	n.	5.5	845	1/10 Cl. St., wnw.	
						1,000	909.9	1.5	77	5.24	n.	6.0	980	200	
						1,250	882.8	4.6	64	5.43	n.	6.8	1,225	550	
8:55	982.5	-8.1	100	nw.	2.7	1,329	874.2	5.6	60	5.46	n.	7.1	1,303	670	
						1,500	856.3	5.3	53	4.72	n.	7.7	1,470	940	
						1,750	830.7	4.8	44	3.78	nnw.	8.6	1,715	1,050	
						2,000	805.5	4.2	34	2.80	nnw.	9.4	1,960	1,210	
10:40	982.7	-4.4	84	nw.	3.6	2,022	803.8	4.2	33	2.72	nnw.	9.5	1,982	1,210	
						2,250	781.2	4.3	30	2.49	nnw.	8.6	2,205	1,360	
						2,500	757.3	4.5	26	2.19	nnw.	7.7	2,450	1,520	
11:09	982.7	-3.5	78	nw.	4.0	2,633	745.8	4.6	24	2.04	nnw.	7.2	2,580	1,600	
						2,750	734.6	4.3	22	1.83	nnw.	7.2	2,694	1,620	
						3,000	712.4	3.8	18	1.44	nw.	7.2	2,939	1,650	
11:34	982.4	-2.7	78	nw.	4.0	3,027	710.4	3.7	18	1.43	nw.	7.2	2,965	1,660	
						3,250	690.8	2.1	15	1.07	nw.	9.1	3,184	1,690	
						3,500	669.8	0.3	11	0.69	nw.	11.3	3,429		
11:45	982.3	-2.4	78	nw.	3.6	3,693	653.8	-1.1	8	0.45	nw.	13.0	3,617	2/10 Cl., nnw. 2/10 Cl. Cu., nnw.	
						3,500	669.8	0.1	7	0.43	nw.	12.1	3,429		
						3,250	690.8	1.7	7	0.48	nw.	11.0	3,184		
P. M.															
12:05	982.0	-2.2	77	wnw.	3.6	3,097	704.0	2.7	6	0.45	nw.	10.3	3,034	1,400	
						3,000	712.4	3.0	6	0.45	nw.	9.8	2,939	1,300	
						2,750	734.6	3.8	6	0.48	nw.	8.7	2,694	1,060	
12:14	981.8	-2.0	77	nw.	3.6	2,518	755.7	4.5	6	0.50	nw.	7.6	2,467	830	
						2,500	757.3	4.5	6	0.50	nw.	7.7	2,450	810	
12:23	981.7	-1.6	77	nw.	3.1	2,275	778.8	4.6	6	0.51	nw.	8.9	2,229	590	
						2,250	781.2	4.5	6	0.50	nw.	9.0	2,205	580	
						2,000	805.5	3.8	6	0.48	nw.	10.2	1,960	530	
12:28	981.6	-1.2	77	w.	3.1	1,866	819.0	3.4	6	0.47	nw.	10.9	1,829	510	
						1,750	830.7	3.9	7	0.57	nw.	10.2	1,715	480	
						1,500	856.3	4.8	8	0.69	wnw.	8.6	1,470	390	
						1,250	882.8	5.8	10	0.92	wnw.	7.0	1,225	290	
12:42	981.3	-1.1	76	w.	4.5	1,005	909.5	6.8	12	1.19	w.	5.5	985	180	
12:43	981.3	-1.0	76	w.	4.5	832	929.1	6.4	15	1.44	w.	5.5	816	110	
						750	938.5	2.9	18	1.35	w.	5.5	735	70	
12:47	981.2	-0.9	76	w.	3.6	598	956.6	-3.7	24	1.08	w.	5.5	586	0	
						500	968.2	-2.1	48	2.46	w.	4.1	490	0	
12:53	981.1	-0.4	73	w.	2.7	396	981.1	-0.4	73	4.31	w.	2.7	388	4/10 Cl., nnw.	

TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Continued.

February 15, 1916, series (No. 8).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
P. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
2:32	980.0	0.5	65	ws.	4.5	396	980.0	0.5		65	4.11	ws.	4.5	388		7/10 Cl.St., n.
						500	968.2	-0.5		70	4.10	w.	5.6	490	0	
2:46	979.8	0.6	66	ws.	4.5	575	958.0	-1.3	1.01	74	4.06	w.	6.4	564	0	4/10 Cl., n.
2:51	979.7	1.1	66	ws.	5.4	731	939.7	6.1	-4.74	63	5.93	w.	6.4	717	0	
						750	937.1	6.1		62	5.84	w.	6.5	735	0	
						1,000	908.3	6.6		55	5.36	w.	7.2	980	0	
						1,250	881.3	7.1		49	4.94	wnw.	7.9	1,225	0	
3:37	979.0	1.8	69	ws.	4.5	1,504	854.7	7.6	-0.19	42	4.38	wnw.	8.7	1,474	0	
						1,750	829.1	5.8		42	3.87	wnw.	9.2	1,715	0	
						2,000	804.0	3.9		43	3.47	wnw.	9.7	1,960	0	
3:45	978.8	1.9	69	ws.	4.5	2,076	796.8	3.3	0.75	43	3.33	wnw.	9.9	2,034	70	
						2,250	779.8	3.3		40	3.10	nw.	10.7	2,205	250	
						2,500	756.0	3.3		35	2.71	nnw.	11.9	2,450	500	
4:10	978.6	2.3	67	sw.	3.6	2,543	752.2	3.3	0.00	34	2.63	nnw.	12.1	2,492	540	
						2,750	733.0	4.7		29	2.48	nnw.	13.1	2,694	720	
4:15	978.6	2.3	68	sw.	3.1	2,845	724.6	5.3	-0.66	26	2.32	nnw.	13.5	2,787	800	5/10 Cl., n.
						3,030	710.6	4.2		24	1.98	nnw.	13.5	2,939	930	
						3,250	689.4	2.4		20	1.45	nnw.	13.5	3,184	1,150	
						3,500	668.5	0.5		17	1.08	nnw.	13.4	3,429	1,360	
						3,750	648.2	-1.4		14	0.76	nnw.	13.4	3,673		
4:46	978.4	2.1	70	sw.	4.5	3,831	641.3	-2.0	0.69	12	0.62	nnw.	13.4	3,752		
						3,750	648.2	-1.5		12	0.65	nnw.	13.2	3,673		
						3,500	668.9	0.1		12	0.74	nnw.	12.7	3,429		
						3,250	690.1	1.7		11	0.76	nnw.	12.2	3,184		
						3,000	711.6	3.3		11	0.85	nnw.	11.7	2,939	700	
5:11	978.3	1.6	76	ws.	4.5	2,888	721.4	4.0	-0.34	11	0.89	nnw.	11.5	2,830	640	
						2,750	734.0	3.5		11	0.86	nnw.	11.4	2,694	580	
						2,500	757.2	2.7		12	0.89	nnw.	11.1	2,450	450	
5:19	978.2	1.4	80	sw.	4.0	2,411	765.3	2.4	0.62	12	0.87	nnw.	11.0	2,363	410	
						2,250	781.0	3.4		14	1.09	nnw.	10.9	2,205	350	
						2,000	805.1	5.0		16	1.40	nnw.	10.7	1,960	270	
5:39	978.0	0.9	88	sw.	4.5	1,750	830.0	6.5		18	1.74	nnw.	10.5	1,715	200	
						1,673	837.4	7.0	0.28	19	1.90	nnw.	10.4	1,640	170	
						1,500	854.9	7.5		21	2.18	nnw.	10.1	1,470	110	
						1,250	881.3	8.2		23	2.50	nw.	9.6	1,225	30	
5:47	977.9	0.7	89	sw.	5.4	1,175	899.6	8.4	0.35	24	2.64	nw.	9.4	1,152	0	6/10 Cl., n.
						1,000	908.3	9.0		28	3.21	wnw.	10.5	980	0	
5:59	977.8	0.6	82	sw.	4.5	832	927.0	9.6	-0.62	31	3.70	wnw.	11.6	816	0	
						750	936.1	9.1		33	3.81	w.	10.2	735	0	
6:06	977.8	0.6	81	sw.	5.4	688	943.3	8.7	-2.77	34	3.82	w.	9.2	675	0	4/10 Cl., n.
						500	965.1	3.5		65	5.10	ws.	6.8	490	0	
6:13	977.7	0.6	79	sw.	5.4	396	977.7	0.6		70	5.04	sw.	5.4	388		

February 16, 1916.

A. M.																Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.	Vel.	Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.	Vap. pres.	Wind.	Vel.	Potential.	Grav. elec.	
9:10	972.5	1.6	77	ws.	3.6	396	972.5	1.6	-----	77	5.28	ws.	3.6	388	-----	Few Cl.St., n.
						500	960.2	5.0	-----	69	6.02	nw.	5.2	490	0	
						750	931.2	13.1	-----	50	7.54	nw.	9.0	735	0	
9:16	972.5	1.6	77	ws.	3.6	777	928.6	14.0	-3.25	48	7.67	nw.	9.4	762	0	
						1,000	903.9	12.8	-----	46	6.80	nw.	10.6	980	0	
						1,250	877.5	11.6	-----	43	5.87	wnw.	11.8	1,225	0	
9:41	972.3	4.2	81	sw.	3.1	1,357	866.6	11.0	0.52	42	5.51	wnw.	12.4	1,330	0	
						1,500	851.8	11.2	-----	42	5.59	wnw.	12.0	1,470	0	
9:55	972.2	4.8	77	sw.	3.1	1,574	844.1	11.3	-0.14	42	5.62	wnw.	11.8	1,543	30	
10:04	972.2	4.8	75	sw.	3.1	1,746	827.0	10.0	0.76	43	5.28	wnw.	11.8	1,711	103	Few Cl.St., n.
						2,000	802.2	8.4	-----	44	4.85	wnw.	12.6	1,960	210	
						2,250	778.1	6.8	-----	46	4.54	nw.	13.4	2,205	380	
						2,500	754.3	5.2	-----	47	4.16	nw.	14.2	2,450	590	
10:35	972.2	4.3	77	sw.	1.8	2,511	753.6	5.1	0.64	47	4.13	nw.	14.3	2,461	600	
10:49	972.2	5.0	76	w.	1.8	2,745	732.5	6.0	-0.38	42	3.93	nw.	13.4	2,689	900	
						3,000	709.2	3.9	-----	42	3.39	nw.	12.7	2,939	980	
						3,250	687.9	1.9	-----	42	2.94	nnw.	11.9	3,184	1,050	
11:45	971.8	8.1	64	ws.	2.2	3,439	672.2	0.4	0.81	42	2.64	nnw.	11.4	3,369	1,150	Few Cl.St., n.
						3,500	667.1	0.0	-----	42	2.57	nnw.	11.5	3,429	1,170	
						3,750	646.8	-1.8	-----	42	2.21	nw.	12.0	3,673	-----	
						4,000	626.8	-3.6	-----	42	1.90	nw.	12.4	3,918	-----	
P. M.																
Time.	Pressure.	Temperature.	Relative humidity.	Wind.	Vel.	Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.	Vap. pres.	Wind.	Vel.	Potential.	Grav. elec.	
12:12	971.5	7.1	65	w.	1.8	4,220	609.4	-5.2	0.69	42	1.65	wnw.	12.8	4,133	-----	
						4,000	626.8	-3.8	-----	42	1.86	wnw.	13.1	3,918	-----	
						3,750	646.8	-2.2	-----	42	2.14	nw.	13.4	3,673	-----	
						3,500	667.1	-0.5	-----	42	2.46	nw.	13.7	3,429	-----	
12:28	971.3	7.0	67	w.	2.2	3,476	669.1	-0.3	0.86	42	2.50	nw.	13.7	3,405	600	
						3,250	687.9	1.6	-----	42	2.88	nw.	12.9	3,184	550	
						3,000	709.2	3.8	-----	42	3.37	nnw.	12.1	2,939	470	
12:56	970.9	7.3	63	w.	4.5	2,847	722.8	5.1	-0.21	42	3.69	nnw.	11.6	2,789	390	
						2,750	731.3	4.9	-----	42	3.64	nnw.	11.6	2,694	350	
12:58	970.9	7.2	64	w.	4.5	2,721	734.1	4.8	0.79	42	3.61	nnw.	11.6	2,666	330	Few Cl.St., n.
						2,500	754.3	6.5	-----	42	4.07	nnw.	12.7	2,450	220	
						2,250	777.3	8.5	-----	42	4.66	nw.	13.8	2,205	100	
1:13	970.8	7.2	64	w.	3.6	2,050	796.6	10.1	0.51	42	5.19	nw.	14.8	2,009	0	
						1,750	825.5	11.6	-----	42	5.30	nw.	14.8	1,960	0	
						1,500	850.5	12.9	-0.54	41	5.74	nw.	14.7	1,715	0	
1:30	970.8	7.3	63	w.	3.6	1,446	856.2	13.2	-----	40	5.95	nw.	14.6	1,470	0	
1:32	970.7	7.4	64	w.	3.6	1,279	873.6	12.3	0.38	40	6.07	nw.	14.6	1,417	0	
						1,250	876.4	12.4	-----	42	6.01	nw.	14.6	1,254	0	
						1,000	902.7	13.4	-----	42	6.05	nw.	14.7	1,225	0	
1:45	970.7	7.4	64	w.	3.6	912	912.5	13.7	-1.18	43	6.61	nw.	15.2	980	0	
						750	930.0	11.8	-----	43	6.74	nw.	15.4	894	0	
						500	958.3	8.8	-----	50	6.92	wnw.	11.7	735	0	
1:59	970.6	7.6	66	w.	3.6	396	970.6	7.6	-----	61	6.91	wnw.	6.0	490	0	
										66	6.89	w.	3.6	388	-----	1/10 Cl.St., n.

## OBSERVATIONS AT DREXEL, FEBRUARY, 1916.

33

TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Continued.

February 17, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Relative humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
8:34	969.8	1.3	95	nw.	2.2	396	969.8	1.3		95	6.37	nw.	2.2	388		7/10 Cl., wnw.; 3/10 Cl.St., wnw.
						500	957.6	3.5		88	6.91	nnw.	4.7	490	0	
						750	928.8	8.9		72	8.21	nnw.	10.7	735	0	
8:44	969.9	3.7	79	wnw.	5.4	835	919.4	10.7	-2.14	66	8.49	n.	12.8	819	0	
						1,000	901.1	10.4		59	7.44	nnw.	14.2	960	0	
						1,250	874.9	10.1		48	5.93	nw.	16.2	1,225	0	
8:55	970.0	2.5	92	nw.	4.9	1,284	871.4	10.0	0.16	46	5.65	nw.	16.5	1,259	0	
						1,500	848.9	8.5		52	5.77	nw.	16.6	1,470	120	
						1,750	823.2	6.8		58	5.73	nw.	16.8	1,715	280	
						2,000	798.7	5.1		64	5.63	nw.	16.9	1,960	440	
9:20	970.1	2.6	92	wnw.	7.6	2,222	777.6	3.6	0.68	70	5.54	nw.	17.0	2,178	590	6/10 Cl., w.; 4/10 Cl.St., w.
						2,250	774.9	3.4		70	5.46	nw.	17.1	2,205	600	
						2,500	751.3	1.9		71	4.98	nw.	17.6	2,450	610	
9:40	970.1	3.2	89	wnw.	5.8	2,749	728.3	0.3	0.63	72	4.49	nw.	18.2	2,693	650	
						3,000	706.1	-1.5		81	4.37	nw.	18.8	2,939	890	
						3,250	684.0	-3.3		89	4.13	wnw.	19.5	3,184	990	
10:03	970.2	3.7	86	nw.	7.1	3,291	680.4	-3.6	0.72	90	4.07	wnw.	19.6	3,224	1,000	4/10 Cl., w.; 4/10 Cl.St., w;
						3,500	662.0	-5.6		97	3.70	wnw.	19.3	3,429	1,070	2/10 A.Cu., wnw.
10:13	970.3	4.3	84	nw.	4.9	3,587	655.4	-6.4	0.95	100	3.56	wnw.	19.2	3,514	1,100	Altitude of A.Cu. base about
10:15	970.3	4.4	84	nw.	4.5	3,661	649.2	-6.7	-0.95	100	3.78	wnw.	20.2	3,586		3,600 m.
10:20	970.3	4.6	83	nw.	7.1	3,749	641.4	-6.2	0.96	92	3.33	wnw.	21.3	3,672		
10:22	970.3	4.7	83	nw.	7.1	3,690	646.1	-5.4	-1.18	90	3.49	wnw.	21.3	3,614		
10:26	970.4	4.9	82	nw.	6.3	3,656	649.2	-5.8	0.71	89	3.34	wnw.	20.2	3,581		
						3,500	662.0	-4.7		87	3.31	wnw.	19.8	3,429		
						3,250	683.6	-2.9		83	3.98	wnw.	19.1	3,184		
						3,000	705.3	-1.1		79	4.40	wnw.	18.4	2,939		
10:58	970.6	6.2	78	nw.	5.8	2,924	712.2	-0.6	0.50	78	4.53	wnw.	18.2	2,865	640	Partial solar halo 11:07 to 11:44
						2,750	727.8	0.3		78	4.87	wnw.	17.9	2,694	450	a. m.
						2,500	750.5	1.5		78	5.31	nw.	17.4	2,450	260	
11:25	970.9	6.9	76	nnw.	4.9	2,301	769.2	2.5	0.62	78	5.70	nw.	17.0	2,255	170	
						2,250	774.1	2.8		77	5.75	nw.	16.9	2,205	160	
						2,000	798.1	4.4		76	6.36	nw.	16.5	1,960	90	
						1,750	823.0	5.9		75	6.97	nw.	16.1	1,715	30	
11:41	971.1	7.0	72	nnw.	6.3	1,656	833.2	6.5	0.64	74	7.16	nw.	16.0	1,623	0	5/10 Cl., w.; 5/10 Cl.St., w.
						1,500	848.9	7.5		68	7.05	nw.	15.8	1,470	0	
						1,250	875.2	9.1		58	6.70	nnw.	15.6	1,225	0	
NOON	971.3	7.1	73	nnw.	7.1	1,106	890.8	10.0	-1.67	53	6.51	nnw.	13.4	1,084	0	
						1,000	902.2	8.2		60	6.52	nnw.	17.0	980	0	
						750	930.3	4.1		77	6.31	n.	20.7	735	0	
P. M.																
12:10	971.4	7.0	73	nnw.	6.7	734	932.1	3.8	0.98	78	6.26	n.	20.9	720	0	
						500	959.3	6.1		75	7.06	nnw.	10.8	490	0	
12:17	971.4	7.1	73	nnw.	6.3	396	971.4	7.1		73	7.37	nnw.	6.3	388		3/10 Cl., w.; 7/10 Cl.St., w.

February 18, 1916.

A. M.																
8:38	982.7	-1.2	84	nnw.	5.4	396	982.7	-1.2		84	4.65	nnw.	5.4	388	.....	1/10 Cl.St., n.
						500	969.7	-2.0		85	4.39	nnw.	8.6	490	0	
						750	939.8	-3.8		85	3.77	nnw.	16.3	735	0	
8:50	982.8	-0.9	84	nnw.	5.8	907	921.3	-4.9	0.72	86	3.48	nnw.	21.2	889	30	
						1,000	910.5	-4.8		85	3.47	n.	21.2	980	120	
8:52	982.8	-0.8	84	n.	5.4	1,092	900.0	-3.1	-0.97	76	3.58	n.	22.0	1,071	170	
						1,250	882.3	-3.7		71	3.18	n.	23.8	1,225	410	
9:12	982.9	-0.6	81	n.	4.9	1,485	856.4	-4.7	0.41	63	2.60	nnw.	26.6	1,456	720	2/10 Cl., n; 3/10 Cl.St., n.
						1,500	854.8	-4.6		63	2.61	nnw.	26.6	1,470	740	
9:14	982.9	-0.5	79	n.	4.9	1,709	832.4	-3.6	-0.49	64	2.89	n.	26.6	1,675	990	
						1,750	828.1	-3.6		62	2.80	n.	26.7	1,715	1,030	
						2,000	802.1	-3.8		53	2.35	nnw.	27.5	1,960	1,370	
9:30	983.0	-1.2	88	n.	6.3	2,033	798.8	-3.8	0.12	52	2.31	nnw.	27.5	1,992	1,400	
						2,000	802.1	-3.7		51	2.28	nnw.	27.5	1,960	1,340	
9:35	983.0	-0.3	71	n.	6.3	1,919	810.4	-3.6	-0.90	50	2.26	nw.	27.5	1,881	1,190	3/10 Cl.St., n.
						1,750	828.1	-5.1		61	2.43	nnw.	27.2	1,715	930	
9:58	983.2	0.4	70	nnw.	7.6	1,697	834.1	-5.6	0.53	65	2.48	nnw.	27.1	1,663	870	4/10 Cl., n.; few Cl.St., n.
						1,500	854.8	-4.6		61	2.53	nnw.	24.6	1,470	660	
						1,250	882.3	-3.2		56	2.62	n.	21.5	1,225	380	
10:14	983.2	0.5	66	n.	4.9	1,127	896.4	-2.6	-6.09	53	2.61	n.	20.0	1,105	230	
10:16	983.3	0.6	67	n.	4.9	1,081	901.8	-5.4	0.62	52	2.02	n.	18.7	1,060	170	
						1,000	911.1	-4.9		56	2.27	n.	17.2	980	120	
10:20	983.3	0.8	62	n.	8.0	791	935.6	-3.6	1.11	68	3.07	n.	13.2	776	0	
						750	940.5	-3.1		67	3.16	n.	12.4	735	0	
						500	970.3	-0.4		62	3.66	n.	7.7	490	0	
10:40	983.3	0.8	60	n.	5.8	396	983.3	0.8		60	3.88	n.	5.8	388	.....	2/10 Cl.St., n.



TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Continued.

February 19, 1916 (No. 1).

Surface.						At different heights above sea.											Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.		
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	Cloudless.	
9:16.....	969.9	3.4	80	ws.	2.2	396	969.9	3.4	.....	80	6.24	ws.	2.2	388	.....		
.....	.....	.....	.....	.....	.....	500	967.3	8.3	.....	61	6.68	w.	4.1	490	0		
9:18.....	969.9	3.4	80	ws.	2.2	537	963.4	10.1	-4.75	54	6.67	wnw.	4.8	526	0		
9:25.....	969.8	3.7	80	ws.	2.2	697	965.1	10.5	-0.25	38	4.83	wnw.	7.7	683	0		
.....	.....	.....	.....	.....	.....	750	928.6	10.3	.....	36	4.51	wnw.	7.5	735	0		
.....	.....	.....	.....	.....	.....	1,000	900.1	9.5	.....	28	3.32	w.	6.8	980	0		
P. M.																	
12:36.....	967.9	8.4	71	sw.	5.4	1,073	892.0	9.2	0.35	26	3.03	w.	6.6	1,052	0		
.....	.....	.....	.....	.....	.....	1,250	872.7	8.6	.....	23	2.57	w.	7.6	1,225	0		
.....	.....	.....	.....	.....	.....	1,500	846.3	7.8	.....	18	1.90	wnw.	8.9	1,470	0		
12:59.....	967.2	10.0	68	sw.	5.8	1,704	825.8	7.2	0.32	14	1.42	wnw.	10.0	1,670	110		
.....	.....	.....	.....	.....	.....	1,750	821.1	7.3	.....	14	1.43	wnw.	10.4	1,715	140		
1:01.....	967.2	10.0	68	sw.	5.8	1,995	797.0	7.8	-0.21	12	1.27	nw.	12.6	1,955	270		
.....	.....	.....	.....	.....	.....	2,250	772.2	5.6	.....	12	1.09	nw.	11.7	2,205	400		
.....	.....	.....	.....	.....	.....	2,500	748.8	3.4	.....	12	0.94	nw.	10.8	2,450	450		
1:23.....	966.9	10.4	66	sw.	5.4	2,734	727.7	1.4	0.87	12	0.81	nw.	9.9	2,679	500		
.....	.....	.....	.....	.....	.....	2,750	726.0	1.3	.....	12	0.81	nw.	10.2	2,694	530		
.....	.....	.....	.....	.....	.....	3,000	703.3	-0.6	.....	12	0.70	nw.	14.9	2,939	920		
1:57.....	966.5	10.5	68	sw.	4.5	3,168	689.2	-1.8	0.74	12	0.63	nw.	15.0	3,104	1,010		
.....	.....	.....	.....	.....	.....	3,250	681.4	-2.0	.....	.....	.....	nw.	.....	3,184	1,050		
.....	.....	.....	.....	.....	.....	3,600	660.4	-2.7	.....	.....	.....	nw.	.....	3,429	1,190		
2:12.....	966.4	11.2	67	sw.	4.5	3,519	659.5	-2.7	0.26	.....	.....	nw.	.....	3,447	1,200		
.....	.....	.....	.....	.....	.....	3,750	640.3	-4.1	.....	.....	.....	nw.	.....	3,673	.....		
2:17.....	966.4	11.3	67	sw.	4.5	4,000	620.4	-5.6	.....	.....	.....	nw.	.....	3,918	.....		
.....	.....	.....	.....	.....	.....	4,011	619.6	-5.7	0.61	.....	.....	nw.	.....	3,929	.....		

February 19, 1916 (No. 2).

P. M.																	
3:25.....	965.7	12.6	67	sw.	5.4	396	965.7	12.6	.....	67	9.78	sw.	5.4	388	.....	Cloudless.	
3:30.....	965.7	12.9	65	sw.	5.8	486	955.4	11.2	1.56	70	9.31	sw.	6.8	476	0		
						500	953.3	11.2	.....	70	9.31	sw.	7.0	490	0		
						750	925.0	11.5	.....	66	8.96	ws.	10.8	735	0		
3:36.....	965.7	13.3	63	sw.	5.8	759	924.7	11.5	-0.11	66	8.96	w.	10.9	744	0		
						1,000	898.0	11.8	.....	59	8.17	w.	10.9	980	0		
3:45.....	965.6	13.4	63	sw.	4.9	1,085	899.2	11.9	-0.12	57	7.94	w.	10.9	1,064	0		
						1,250	871.8	11.5	.....	53	7.19	wnw.	10.8	1,225	0		
3:48.....	965.6	13.8	64	sw.	4.9	1,330	863.7	11.3	0.24	51	6.83	wnw.	10.7	1,304	0		
						1,500	846.0	10.6	.....	48	6.13	wnw.	11.8	1,470	0		
						1,750	821.0	9.5	.....	44	5.22	nw.	13.4	1,715	0		
4:02.....	965.6	13.0	65	sw.	4.0	1,978	798.8	8.5	0.43	40	4.44	nw.	14.8	1,939	0		
						2,000	796.2	8.3	.....	40	4.38	nw.	14.8	1,960	20		
						2,250	772.2	6.4	.....	38	3.65	nw.	15.2	2,205	170		
						2,500	748.3	4.5	.....	36	3.03	nw.	15.7	2,450	320		
						2,750	726.1	2.6	.....	34	2.51	nw.	16.2	2,694	470		
						3,000	704.3	0.7	.....	31	1.99	nw.	16.6	2,939	620		
4:21.....	965.5	12.2	70	ssw.	4.9	3,121	694.0	-0.2	0.77	30	1.80	nw.	16.8	3,058	.....	Cloudless.	
						3,000	704.3	0.7	.....	29	1.86	nw.	16.9	2,939	.....		
						2,750	726.6	2.7	.....	28	2.08	nw.	17.1	2,694	.....		
4:36.....	965.4	12.0	70	ssw.	4.5	2,514	748.2	4.5	0.73	27	2.27	nw.	17.3	2,464	380		
						2,500	749.3	4.6	.....	27	2.29	nw.	17.2	2,450	370		
						2,250	772.5	6.4	.....	26	2.50	nw.	16.2	2,205	250		
						2,000	796.2	8.2	.....	26	2.83	nw.	15.3	1,960	130		
						1,750	821.0	10.0	.....	25	3.07	nw.	14.4	1,715	10		
4:45.....	965.3	12.0	71	sw.	4.5	1,731	822.6	10.2	0.00	25	3.11	nw.	14.3	1,697	0		
						1,500	845.2	10.2	.....	25	3.11	wnw.	14.3	1,470	0		
4:51.....	965.3	12.1	70	ssw.	4.5	1,404	855.7	10.2	0.56	25	3.11	wnw.	14.3	1,376	0		
						1,250	871.3	11.1	.....	25	3.30	wnw.	12.1	1,225	0		
						1,000	898.0	12.5	.....	25	3.62	w.	8.8	980	0		
4:59.....	965.2	12.7	67	sw.	4.5	956	902.8	12.7	-0.86	25	3.67	w.	8.2	937	0		
5:00.....	965.2	12.8	66	sw.	4.5	805	919.2	11.4	0.29	27	3.64	w.	8.2	789	0		
						750	925.0	11.6	.....	33	4.51	ws.	7.7	735	0		
						500	953.3	12.3	.....	58	8.30	ws.	5.4	490	0		
5:08.....	965.1	12.6	68	sw.	4.5	396	965.1	12.6	.....	68	9.92	sw.	4.5	388	.....	Cloudless.	

February 20, 1916.

A. M.																
10:36.....	968.2	5.8	74	nne.	2.7	396	968.2	5.8	.....	74	6.82	nne.	2.7	388	.....	Cloudless.
						500	956.1	4.9	.....	72	6.24	nne.	4.5	490	0	
10:40.....	968.2	5.8	74	nne.	2.7	617	942.4	3.9	0.86	70	5.66	nne.	6.0	605	0	
						750	927.2	5.4	.....	66	5.92	n.	8.0	735	0	
						1,000	899.3	8.3	.....	59	6.46	n.	10.7	980	0	
10:50.....	968.2	6.2	69	n.	1.8	1,247	873.2	11.1	-1.14	52	6.87	nnw.	13.3	1,222	0	
11:52.....	968.5	7.6	65	n.	2.2	1,418	855.9	11.5	-0.23	47	6.38	nnw.	8.7	1,390	380	
						1,500	847.2	10.8	.....	47	6.09	nnw.	8.8	1,470	.....	
P. M.																
12:19.....	968.5	8.0	65	ne.	2.2	1,575	840.0	10.2	0.85	47	5.85	nnw.	8.8	1,544	.....	Cloudless.
						1,500	847.2	10.9	.....	47	6.13	nnw.	8.4	1,470	.....	
12:30.....	968.4	8.0	63	ene.	2.7	1,380	859.9	11.9	-0.62	47	6.55	nnw.	7.8	1,353	.....	
12:40.....	968.4	8.0	62	ene.	2.7	1,251	873.2	11.1	-0.82	47	6.21	nnw.	11.7	1,226	0	
						1,000	899.3	9.0	.....	46	5.28	n.	9.2	980	0	
12:48.....	968.4	8.3	65	ene.	2.7	838	917.7	7.7	-0.50	46	4.83	n.	7.6	822	0	
						750	927.2	7.3	.....	48	4.91	n.	6.4	735	0	
12:54.....	968.4	8.2	63	ne.	1.8	598	945.2	6.5	0.85	52	5.03	nne.	4.4	584	0	
						500	956.1	7.3	.....	57	5.83	nne.	3.2	490	0	
12:55.....	968.4	8.2	63	ne.	1.8	396	968.4	8.2	.....	63	6.85	ne.	1.8	388	.....	Cloudless.

## OBSERVATIONS AT DREXEL, FEBRUARY, 1916.

35

TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Continued.

February 21, 1916, series (No. 1).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%	s.	m. p. s.	m.	mb.	° C.		%	mb.	s.	m. p. s.	$10^6$ ergs.	volts.	
9:07	970.2	1.8	93	s.	4.9	396	970.2	1.8		93	6.47	s.	4.9	388		1/10 Cl.St., wnw.; light haze.
						500	957.6	4.1		88	7.21	s.	7.7	490	0	
9:10	970.2	1.9	92	s.	4.9	714	933.1	6.6	-1.51	82	8.00	ssw.	10.7	700	0	
						750	929.0	6.6		81	7.90	ssw.	10.6	735	0	
						1,000	900.6	6.8		74	7.31	ssw.	10.2	980	0	
9:31	970.1	2.6	91	s.	5.4	1,020	898.9	6.8	-0.07	73	7.21	ssw.	10.2	1,000	0	
						1,250	873.6	8.0		59	6.33	sw.	9.2	1,225	420	
10:20	969.9	4.5	88	s.	4.9	1,477	850.7	9.2	-0.53	46	5.35	sw.	8.3	1,448	705	
						1,500	847.3	9.1		45	5.20	sw.	8.4	1,470	830	
						1,750	822.5	7.6		44	4.59	wsnw.	9.0	1,715	730	
						2,000	798.1	6.2		43	4.08	wsnw.	9.7	1,960	620	
10:51	969.7	5.8	86	s.	5.4	2,250	774.0	4.8		42	3.61	w.	10.2	2,205	510	
						2,305	769.2	4.0	0.62	41	3.33	w.	10.5	2,259	490	
						2,250	774.0	4.3		41	3.41	w.	10.4	2,205	500	
						2,000	798.1	5.8		41	3.78	wsnw.	9.8	1,960	560	1/10 Cl.St., wnw.; light haze.
						1,750	822.5	7.4		41	4.22	wsnw.	9.1	1,715	620	
						1,500	847.3	9.0		41	4.71	sw.	8.4	1,470	670	
11:55	969.3	8.2	78	s.	4.5	1,248	874.7	10.5		41	5.21	sw.	7.9	1,223	835	
						1,500	847.3	9.3		41	4.81	sw.	7.8	1,470		
						1,750	822.5	8.1		42	4.54	sw.	7.8	1,715		
						2,000	798.1	6.9		42	4.18	sw.	7.7	1,960		
P. M.																
12:01	969.3	8.2	78	s.	4.5	2,035	795.3	6.7	0.48	42	4.12	sw.	7.7	1,994		
						2,250	774.0	4.9		42	3.64	wsnw.	8.3	2,205		
						2,500	750.3	2.8		42	3.14	wsnw.	8.9	2,450		
12:10	969.0	8.8	77	s.	5.8	2,717	730.7	1.0	0.78	42	2.76	w.	9.5	2,662		Cloudless; light haze.
						2,500	750.3	2.6		42	3.10	w.	9.8	2,450		
						2,250	774.0	4.4		43	3.60	wsnw.	10.2	2,205		
						2,000	798.1	6.2		43	4.08	wsnw.	10.6	1,960		
12:31	968.4	9.9	76	s.	6.3	1,862	811.1	7.2	0.43	43	4.37	wsnw.	10.8	1,825		
						1,750	822.5	7.7		43	4.52	wsnw.	10.4	1,715		
						1,500	847.3	8.8		43	4.87	wsnw.	9.6	1,470		
						1,250	872.8	9.8		44	5.33	sw.	8.7	1,225		
12:40	968.2	10.2	73	ssw.	6.3	1,110	888.1	10.4	-8.21	44	5.55	sw.	8.2	1,088	0	
12:50	967.9	10.5	70	ssw.	7.6	1,082	890.8	8.1	0.21	45	4.86	sw.	10.2	1,061	0	
						1,000	899.1	8.3		47	5.15	sw.	10.6	980	0	
						750	926.5	8.8		54	6.12	ssw.	12.0	735	0	
1:06	967.6	10.8	68	ssw.	7.1	707	931.8	8.9	-0.83	56	6.38	ssw.	12.2	693	0	
1:08	967.5	11.2	68	ssw.	8.0	586	945.6	7.9	2.11	60	6.39	ssw.	10.2	574	0	
						500	955.0	9.7		63	7.58	ssw.	8.8	490	0	
1:11	967.5	11.9	67	ssw.	7.1	396	967.5	11.9		67	9.33	ssw.	7.1	388		Cloudless; light haze.

February 21, 1916, series (No. 2).

P. M.															
1:52	967.3	12.1	64	ssw.	8.9	396	967.3	12.1	-----	64	9.04	ssw.	8.0	388	Cloudless.
						500	955.1	10.9	-----	63	8.22	ssw.	9.3	490	0
1:56	967.2	11.9	64	ssw.	8.5	755	926.3	8.1	1.11	61	6.59	ssw.	10.2	740	0
						1,000	899.1	8.6	-----	54	6.03	sw.	9.6	980	0
2:15	967.0	12.2	65	ssw.	8.0	1,202	877.5	9.1	-0.22	48	5.55	sw.	9.1	1,178	0
						1,250	872.4	9.1	-----	47	5.43	sw.	9.0	1,225	0
						1,500	846.6	9.1	-----	40	4.62	sw.	8.2	1,470	0
2:52	966.6	12.9	66	ssw.	7.6	1,612	835.1	9.1	0.00	37	4.28	sw.	7.9	1,580	0
						1,750	821.3	8.2	-----	37	4.03	sw.	7.7	1,715	0
						2,000	796.3	6.6	-----	37	3.61	sw.	7.2	1,960	0
						2,250	772.3	4.9	-----	37	3.20	sw.	6.8	2,205	0
3:20	966.5	13.6	66	ssw.	7.1	2,380	760.5	4.0	0.66	37	3.01	sw.	6.6	2,332	0
						2,500	748.8	3.0	-----	37	2.80	sw.	7.7	2,450	0
						2,750	726.0	0.8	-----	37	2.39	wsnw.	9.9	2,694	0
						3,000	703.7	-1.3	-----	37	2.03	wsnw.	12.1	2,939	0
3:55	966.4	14.1	64	s.	4.5	3,059	698.9	-1.8	0.84	37	1.95	wsnw.	12.6	2,997	Cloudless.
						3,000	703.7	-1.3	-----	37	2.03	wsnw.	12.5	2,939	0
						2,750	726.0	0.8	-----	37	2.39	wsnw.	12.1	2,694	0
						2,500	748.8	2.8	-----	36	2.69	sw.	11.7	2,450	0
						2,250	772.3	4.8	-----	36	3.10	sw.	11.3	2,205	0
4:19	966.3	14.1	66	s.	4.5	2,109	786.4	6.0	0.83	36	3.37	sw.	11.1	2,067	0
						2,000	796.3	6.9	-----	35	3.48	sw.	10.4	1,960	0
						1,750	821.3	9.0	-----	35	4.02	ssw.	8.9	1,715	0
4:28	966.2	14.0	66	ssw.	3.6	1,640	832.4	9.9	0.28	34	4.15	ssw.	8.2	1,607	0
						1,500	846.6	10.3	-----	34	4.26	ssw.	8.5	1,470	0
						1,250	872.4	11.0	-----	33	4.33	ssw.	9.0	1,225	0
4:45	966.1	13.7	69	ssw.	4.0	1,098	888.2	11.4	-0.57	33	4.45	ssw.	9.2	1,076	0
						1,000	898.7	10.8	-----	34	4.40	ssw.	9.1	980	0
4:46	966.1	13.6	69	ssw.	3.1	835	916.7	9.9	0.82	36	4.39	ssw.	8.8	819	0
						750	926.0	10.6	-----	43	5.50	s.	7.7	735	0
						500	953.7	12.6	-----	62	9.05	s.	4.5	490	0
4:58	966.0	13.5	70	ssw.	3.1	396	966.0	13.5	-----	70	10.83	ssw.	3.1	388	Cloudless.

TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Continued.

February 21, 1916, series (No. 3).

Surface.						At different heights above sea.											Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.		
A. M.	mb.	° C.	%	se.	m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.		
5:36	965.7	11.2	76	se.	4.0	396	965.7	11.2		76	10.10	se.	4.0	388	.....	Cloudless.	
						500	953.2	11.3		79	10.58	sse.	4.9	480	0		
5:39	965.6	11.1	77	se.	4.0	580	944.6	11.3	-0.05	81	10.85	sse.	5.6	569	0		
						750	925.2	10.5		80	10.16	s.	7.0	735	0		
5:52	965.5	10.2	80	se.	4.0	862	913.0	9.9	0.50	79	9.64	ssw.	8.0	845	0		
						1,000	897.7	10.5		72	9.14	ssw.	8.7	980	0		
5:53	965.5	10.1	80	se.	4.0	1,112	886.0	11.0	-0.44	67	8.80	ssw.	9.2	1,090	0		
						1,250	871.3	10.7		62	7.98	sw.	9.7	1,225	0		
						1,500	845.3	10.1		53	6.55	wsnw.	11.0	1,470	0		
6:14	965.4	8.3	85	se.	4.9	1,598	835.6	9.9	0.23	49	5.98	wsnw.	11.5	1,566	0		
						1,750	820.2	8.5		46	5.11	wsnw.	11.4	1,715	50		
						2,000	795.8	6.3		42	4.01	wsnw.	11.2	1,960	130		
6:30	965.5	7.4	88	se.	5.4	2,146	781.8	5.0	0.89	39	3.40	wsnw.	11.1	2,103	180		
						2,250	771.8	4.3		38	3.16	wsnw.	11.0	2,205	220		
						2,500	747.9	2.5		36	2.63	wsnw.	10.8	2,450	300		
6:45	965.6	7.1	87	se.	4.9	2,583	740.7	1.9	0.71	35	2.45	wsnw.	10.7	2,531	330		
						2,750	725.0	0.2		35	2.17	wsnw.	9.7	2,694	420		
7:02	965.6	6.8	88	se.	4.5	2,947	708.0	-1.9	1.04	36	1.88	wsnw.	8.6	2,887	550		
						3,000	703.3	-2.4		36	1.80	wsnw.	9.2	2,939	660		
						3,250	681.4	-4.5		37	1.55	wsnw.	11.8	3,184	.....	Cloudless.	
7:42	965.7	6.3	89	se.	5.4	3,312	676.1	-5.0	0.75	37	1.48	wsnw.	12.4	3,245	.....		
						3,250	681.4	-4.6		38	1.58	wsnw.	12.3	3,184	.....		
						3,000	703.3	-3.0		39	1.85	wsnw.	12.2	2,939	.....		
						2,750	725.0	-1.4		40	2.18	wsnw.	12.1	2,694	.....		
8:03	965.7	6.0	90	se.	5.4	2,709	729.3	-1.1	0.98	40	2.23	wsnw.	12.1	2,654	.....		
						2,500	747.9	0.9		41	2.67	wsnw.	12.3	2,450	.....		
						2,250	771.8	3.4		41	3.20	wsnw.	12.4	2,205	.....		
8:16	965.6	5.7	91	se.	5.4	2,096	787.0	4.9	0.82	42	3.64	wsnw.	12.6	2,054	1,480		
						2,000	795.8	5.7		42	3.85	wsnw.	13.0	1,960	1,200		
						1,750	820.2	7.7		43	4.52	sw.	13.9	1,715	430		
8:25	965.6	5.4	92	se.	5.4	1,630	832.9	8.7	0.97	43	4.84	sw.	14.3	1,598	60		
						1,500	845.3	10.0		43	5.28	sw.	14.5	1,470	0		
						1,250	871.3	12.4		42	6.05	ssw.	14.8	1,225	0		
8:35	965.5	5.4	92	se.	5.4	1,229	874.0	12.6	0.58	42	6.13	ssw.	14.8	1,205	0		
8:39	965.5	5.5	92	se.	5.4	1,023	895.4	13.8	-1.18	42	6.63	ssw.	10.8	1,003	0		
						1,000	897.7	13.5		43	6.65	ssw.	10.7	980	0		
8:45	965.5	5.4	92	se.	4.9	786	921.2	11.0	0.34	52	6.83	s.	9.7	771	0		
						750	925.2	11.1		53	7.00	s.	9.3	735	0		
8:51	965.4	5.5	90	se.	5.4	551	947.4	11.8	-4.13	60	8.30	sse.	7.1	540	0		
						500	953.2	9.7		70	8.42	sse.	6.5	490	0		
8:54	965.4	5.4	91	se.	5.4	396	965.4	5.4		91	8.16	se.	5.4	388	.....	Cloudless.	

February 21-22, 1916, series (No. 4).

P. M.																
9:38	965.3	5.4	89	sse.	4.9	396	965.3	5.4	-----	89	7.98	sse.	4.9	388	-----	Few Cl.St., wsw.
						500	953.2	7.2	-----	86	8.74	s.	7.0	490	0	
						750	925.1	11.7	-----	79	10.86	s.	12.1	735	0	
9:43	965.3	5.3	89	sse.	4.5	831	916.0	13.1	-1.77	77	11.61	ssw.	13.8	815	0	
						1,000	897.7	13.0	-----	68	10.19	ssw.	14.9	980	0	
9:55	965.2	5.2	89	se.	4.9	1,226	874.0	12.9	0.05	55	8.18	sw.	16.3	1,202	0	
						1,250	871.3	12.7	-----	55	8.08	sw.	16.3	1,225	0	
						1,500	845.5	10.4	-----	55	6.94	sw.	16.3	1,470	0	
10:06	965.2	5.0	89	se.	4.5	1,614	834.2	9.4	0.90	55	6.48	sw.	16.3	1,582	0	
						1,750	820.2	8.3	-----	55	6.02	sw.	15.4	1,715	180	
10:18	965.1	4.7	92	se.	4.5	1,904	805.2	7.1	0.79	54	5.45	sw.	14.3	1,866	380	Few Cl.St., wsw.
						2,000	795.9	6.2	-----	54	5.12	sw.	13.9	1,960	460	
						2,250	771.9	4.0	-----	55	4.47	wsnw.	12.7	2,205	670	
10:31	965.0	4.3	92	sse.	4.0	2,353	762.2	3.1	0.89	55	4.20	wsnw.	12.2	2,306	750	
						2,500	748.1	1.9	-----	54	3.79	wsnw.	13.8	2,450	830	
11:00	964.9	3.6	94	sse.	4.9	2,727	727.6	0.1	0.80	52	3.20	wsnw.	16.2	2,672	950	
						2,750	725.2	-0.1	-----	52	3.15	wsnw.	16.1	2,694	970	
						3,000	702.9	-2.7	-----	51	2.49	wsnw.	15.6	2,939	1,100	
11:14	964.8	3.9	95	sse.	4.5	3,216	684.2	-4.9	0.94	50	2.02	wsnw.	15.1	3,151	-----	Cloudless; surface fog.
						3,000	702.9	-3.0	-----	50	2.38	wsnw.	14.5	2,939	-----	
						2,750	725.2	-0.8	-----	50	2.86	wsnw.	13.8	2,694	-----	
						2,500	748.1	1.3	-----	50	3.36	wsnw.	13.0	2,450	-----	
11:38	964.6	4.1	96	sse.	4.0	2,492	749.4	1.4	0.84	50	3.38	wsnw.	13.0	2,442	-----	
						2,250	771.9	3.4	-----	51	3.98	wsnw.	12.3	2,205	-----	
						2,000	795.9	5.5	-----	52	4.70	sw.	11.6	1,960	-----	
11:51	964.5	3.9	96	sse.	3.1	1,934	802.5	6.1	0.94	53	4.99	sw.	11.4	1,896	540	
						1,750	820.2	7.8	-----	52	5.50	sw.	12.0	1,715	320	
A. M.																
12:01	964.4	3.7	97	sse.	2.7	1,496	846.1	10.2	0.90	51	6.35	sw.	12.8	1,466	0	
						1,250	871.3	12.4	-----	52	7.49	ssw.	13.6	1,225	130	
12:10	964.3	3.7	97	sse.	3.6	1,184	878.1	13.0	0.75	52	7.79	ssw.	13.8	1,161	170	
						1,000	897.7	14.4	-----	51	8.36	ssw.	14.6	980	90	
12:20	964.2	3.6	98	se.	4.0	813	917.4	15.8	0.43	50	8.98	ssw.	15.3	797	0	
						750	924.2	16.1	-----	51	9.33	ssw.	13.2	735	0	
12:23	964.2	3.5	98	se.	4.0	625	938.0	16.6	-5.63	53	10.01	s.	9.1	613	0	
						500	951.9	9.6	-----	78	9.32	sse.	6.8	490	0	
12:27	964.1	3.7	98	se.	4.0	396	964.1	3.7	-----	98	7.80	se.	4.0	388	-----	Cloudless.



## OBSERVATIONS AT DREXEL, FEBRUARY, 1916.

37

TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Continued.

February 22, 1916, series (No. 3).

Surface.						At different heights above sea.										Potential.		Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.						
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.					
A. M.	mb.	° C.	%	dir.	m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	$10^6$ ergs.	volts.			
1:14	963.7	2.9	97	sse.	4.9	396	963.7	2.9	.....	97	7.30	sse	4.9	388	.....	Cloudless; surface fog.		
1:16	963.7	2.9	97	.....	.....	500	951.5	6.9	.....	89	8.86	s. s.	.....	490	0			
						713	927.5	15.1	-3.85	74	12.70	sw.	.....	699	0			
						750	923.5	15.0	.....	73	12.45	sw.	.....	735	120			
1:30	963.6	2.3	98	sse.	4.9	1,000	896.5	14.5	.....	63	10.40	sw.	.....	980	.....	Cloudless; light fog.		
						1,094	886.6	14.3	0.21	60	9.78	sw.	.....	1,073	170			
						1,250	870.1	13.3	.....	59	9.01	sw.	.....	1,225	65			
2:40	963.0	1.5	99	se.	3.6	1,500	844.1	11.8	.....	58	8.03	sw.	.....	1,470	.....	Cloudless; dense fog.		
						1,607	833.3	11.1	0.62	57	7.53	sw.	6.6	1,575	.....			
						1,750	818.2	9.3	.....	58	6.80	wsnw.	6.0	1,715	.....			
3:52	963.1	1.5	100	nnw.	1.8	1,923	800.3	7.1	1.04	60	6.05	w.	5.2	1,885	810			
						1,750	816.2	8.5	.....	61	6.77	w.	6.6	1,715	.....			
						1,558	834.6	10.1	0.64	63	7.79	w.	8.2	1,527	.....	Wire caught in trees; head kite continued to fly.		
4:30	963.2	0.2	97	ne.	1.3	1,500	841.3	10.5	.....	64	8.13	w.	8.5	1,470	.....			
						1,275	863.8	11.9	.....	69	9.61	w.	9.7	1,293	.....			
						1,319	859.8	10.6	.....	67	8.56	wnw.	8.2	1,423	.....	Dense fog ended 7:15 a. m.		
5:00	963.8	0.6	100	nw.	5.4	1,452	846.6	8.5	.....	67	7.44	nw.	10.2	1,429	.....			
6:00	964.5	0.0	100	nnw.	6.3	1,458	846.6	7.6	.....	67	6.99	nw.	12.8	1,431	.....	10/10 St., nw.		
7:00	964.5	0.0	100	nw.	6.7	1,460	846.6	6.0	0.20	72	6.73	nw.	13.4	1,225	.....			
8:00	965.2	0.0	100	nnw.	6.7	1,250	868.2	6.4	.....	76	7.30	nw.	13.8	1,095	.....			
9:00	965.8	0.0	100	nnw.	7.6	1,117	883.9	6.7	-4.15	78	7.65	nw.	.....	980	.....			
9:58	967.2	0.0	100	nnw.	7.6	1,000	896.5	1.8	.....	90	6.26	nw.	.....	892	.....			
10:30	967.4	0.0	100	n.	7.1	910	907.0	-1.9	-0.04	100	5.22	nw.	.....	735	.....			
10:45	967.6	0.0	100	nnw.	7.1	750	925.3	-2.0	.....	100	5.17	nw.	.....	668	.....			
						681	933.0	-2.0	0.71	100	5.17	nw.	.....	490	.....			
						500	954.8	-0.7	.....	100	5.76	nnw.	6.3	388	.....	10/10 St., nw.		
11:00	967.7	0.0	100	nnw.	6.3	396	967.7	0.0	.....	100	6.11	nnw.	6.3	388	.....			

February 23, 1916.

P. M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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February 24, 1916.

A. M.																	
8:32	970.4	2.4	74	wnw.	5.8	396	970.4	2.4	.....	74	5.37	wnw.	5.8	388	.....	3/10 St.Cu., nnw.	
						500	957.8	1.9	.....	76	5.33	nw.	9.8	490	0		
						750	928.3	0.7	.....	80	5.14	nnw.	19.3	735	0		
8:37	970.4	2.5	75	wnw.	7.1	778	925.4	0.6	0.47	80	5.10	nnw.	20.4	763	0		
						1,000	900.0	-1.4	.....	84	4.57	nnw.	21.3	980	0		
8:46	970.5	2.5	73	nw.	7.1	1,158	882.4	-2.5	0.82	87	4.32	nnw.	22.0	1,145	0	7/10 St.Cu., nnw.	
						1,250	872.3	-3.3	.....	89	4.13	nnw.	21.9	1,225	140		
						1,500	844.9	-5.5	.....	96	3.69	nnw.	21.7	1,470	640		
9:08	970.6	3.2	69	nw.	8.0	1,675	826.6	-7.1	0.89	100	3.35	nnw.	21.5	1,642	710	8/10 St.Cu., nnw.	
						1,750	818.7	-5.1	.....	85	3.38	nnw.	22.9	1,715	730	Altitude of St.Cu. base about 1,600 m.	
9:10	970.6	3.2	69	nw.	7.6	1,789	814.7	-4.0	-2.72	77	3.36	nnw.	23.7	1,753	750		
						2,000	793.3	-4.7	.....	58	2.39	nnw.	24.0	1,960	850		
9:34	970.8	3.4	68	nw.	6.3	2,157	777.7	-5.3	.....	43	1.68	nnw.	24.3	2,114	940		
						2,250	768.7	-5.8	.....	40	1.50	nnw.	24.5	2,205	1,000		
						2,500	743.7	-7.3	.....	32	1.05	nnw.	25.0	2,450	1,150		
10:06	971.0	4.0	72	nw.	8.9	2,672	726.7	-8.3	0.58	26	0.78	nnw.	25.4	2,619	1,250		
						2,500	743.7	-7.3	.....	29	0.95	nnw.	23.9	2,450	1,120		
10:12	971.0	3.8	65	nnw.	10.2	2,340	759.3	-6.4	0.67	31	1.10	nnw.	22.6	2,293	1,000		
						2,250	768.7	-5.8	.....	31	1.16	nnw.	21.8	2,205	910		
						2,000	793.3	-4.2	.....	32	1.38	nnw.	19.7	1,960	670		
						1,750	818.7	-2.5	.....	33	1.64	nnw.	17.6	1,715	510		
10:33	971.3	3.0	65	nw.	10.7	1,742	819.7	-2.4	-2.75	33	1.65	nnw.	17.5	1,707	500	10/10 St.Cu., nnw.	
10:35	971.3	2.9	66	nw.	11.2	1,675	837.0	-7.0	0.48	53	1.79	nnw.	17.5	1,544	400	Altitude of St.Cu. base about 1,400 m.	
						1,500	844.9	-6.6	.....	61	2.14	nnw.	17.7	1,470	350		
						1,250	872.3	-5.4	.....	86	3.34	nw.	18.4	1,225	130		
10:51	971.5	3.0	66	nw.	9.4	1,161	882.4	-5.0	0.86	95	3.81	nw.	18.7	1,138	0		
						1,000	900.4	-3.6	.....	87	3.93	nw.	16.8	980	0		
11:03	971.6	3.2	65	nw.	8.9	787	925.4	-1.8	1.15	77	4.05	nw.	14.3	772	0		
						750	929.3	-1.4	.....	76	4.13	nw.	13.8	735	0		
						500	959.0	1.5	.....	67	4.56	nw.	10.3	490	0		
11:11	971.8	2.7	64	nw.	8.9	396	971.8	2.7	.....	64	4.75	nw.	8.9	388	.....	9/10 St.Cu., nnw.	

TABLE 3.—Free-air data from kite flights at Drezel Aerological Station, February, 1916—Continued.

February 25, 1916.

Surface.						At different heights above sea.												Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.				
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.			
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10° ergs.	volts.			
9:26	971.0	-1.6	90	sw.	4.5	396	971.0	-1.6		90	4.82	sw.	4.5	388		4/10 A.Cu.,nw.; 6/10 St.Cu.,nw.		
						500	958.2	-0.7		87	5.01	ws.w.	7.0	490	120			
9:30	971.0	-1.5	90	sw.	5.8	735	930.8	1.2	-0.83	79	5.26	w.	12.6	721	380			
						750	929.1	1.2		79	5.26	w.	12.6	735	380			
						1,000	900.2	0.6		71	4.53	wnw.	12.6	980	380			
9:48	970.7	-0.1	85	sw.	4.9	1,147	884.1	0.2	0.24	66	4.09	wnw.	12.6	1,124	380			
						1,250	872.5	-0.3		66	3.93	wnw.	13.1	1,225	450			
9:58	970.6	0.5	80	sw.	6.7	1,502	845.7	-1.6	0.51	66	3.53	wnw.	14.3	1,472	615	8/10 A.Cu.,nw.; 2/10 St.Cu.,nw.		
						1,750	819.5	-3.1		76	3.58	wnw.	16.0	1,715	820			
						2,000	794.0	-4.5		86	3.60	nw.	17.6	1,960	1,020			
10:20	970.6	1.5	75	ws.w.	5.1	2,250	769.5	-6.0		95	3.50	nw.	19.3	2,205	1,230	Altitude of St.Cu. base about 2,200 m.		
						2,354	759.3	-6.6	0.59	100	3.50	nw.	20.0	2,307	1,360	3/10 A.Cu.,nw.; 7/10 St.Cu.,nw.		
						2,500	745.5	-5.7		78	2.95	nw.	19.1	2,450	1,560			
10:28	970.6	1.4	76	ws.w.	6.3	2,575	738.1	-5.2	-0.63	66	2.60	nw.	18.7	2,523	1,650			
						2,750	722.3	-6.5		65	2.29	nw.	19.6	2,694	1,890			
						3,000	699.3	-8.4		64	1.91	nw.	20.8	2,939	2,210			
						3,250	676.8	-10.2		63	1.61	nw.	22.1	3,184				
10:50	970.6	1.4	75	ws.w.	6.7	3,265	675.5	-10.3	0.74	63	1.59	nw.	22.2	3,198		2/10 A.Cu.,nw.; 8/10 St.Cu.,nw.		
10:55	970.6	1.5	74	ws.w.	6.7	3,300	672.4	-9.7	-1.71	50	1.34	nw.	22.2	3,233				
11:04	970.6	1.7	73	ws.w.	6.3	3,459	658.3	-10.6	0.38	36	0.89	nw.	23.1	3,388				
11:16	970.5	2.1	71	ws.w.	4.5	3,363	666.0	-10.4	-0.54	32	0.80	nw.	22.9	3,295	2,800			
11:23	970.4	2.6	66	w.	4.9	3,270	673.9	-10.9	0.75	44	1.05	nw.	22.9	3,203	2,570	10/10 St.Cu.,nw.		
						3,250	675.5	-10.7		44	1.07	nw.	22.8	3,184	2,500			
						3,000	697.2	-8.8		50	1.44	nw.	21.4	2,939	2,220			
						2,750	720.0	-7.0		56	1.89	nw.	19.9	2,694	1,970			
11:55	970.2	4.9	68	w.	5.4	2,739	721.8	-6.9	0.63	56	1.91	nw.	19.8	2,684	1,950	8/10 St.Cu.nw.		
						2,500	743.1	-5.4		44	1.71	nw.	18.1	2,450	1,560			
						2,250	767.4	-3.8		32	1.42	nw.	16.4	2,206	1,190			
P. M.																		
12:18	970.0	4.9	72	nw.	5.8	2,169	776.0	-3.3	-2.36	28	1.30	nw.	15.8	2,126	1,170			
						2,000	792.3	-7.3		70	2.30	nw.	17.9	1,960	1,110			
12:29	969.9	4.8	73	nw.	6.3	1,936	799.4	-8.8	0.92	86	2.49	nw.	18.7	1,897	1,100	7/10 St.Cu.,nw.; 3/10 St.,nw.		
						1,750	818.1	-7.1		90	3.02	nw.	18.0	1,715	800			
						1,500	844.5	-4.8		95	3.88	nw.	17.0	1,470	380			
12:47	969.7	5.4	69	nnw.	6.3	1,254	871.8	-2.5	0.94	100	4.96	nnw.	16.0	1,229	0			
						1,000	899.8	-0.1		93	5.64	nw.	14.5	980	0			
12:58	969.6	5.7	70	nw.	7.6	871	914.5	1.1	0.97	90	5.96	nw.	13.8	854	0			
						750	928.3	2.3		85	6.13	nw.	12.1	735	0			
						500	957.0	4.7		74	6.32	nw.	8.6	490	0			
1:08	969.5	5.7	69	nw.	7.1	396	969.5	5.7		69	6.32	nw.	7.1	388		5/10 St.Cu.,nw.; 5/10 St.,nw.		

February 26, 1916.

P. M.																		
1:07	976.4	-4.3	67	nnw.	10.7	396	976.4	-4.3		67	2.85	nnw.	10.7	388			10/10 St.Cu., nnw.	
						500	963.1	-5.7		68	2.57	nnw.	11.5	490	0		Light snow.	
						750	932.8	-9.2		71	1.98	nnw.	13.5	735	0			
1:15	976.4	-5.0	71	nnw.	8.9	928.2	928.2	-9.7	1.36	71	1.90	nnw.	13.8	775	0		Altitude of St.Cu. base about	
						1,000	902.7	-11.3		76	1.76	nnw.	14.6	980	380		900 m.	
1:26	976.3	-4.6	73	nnw.	12.1	1,226	876.9	-13.1	0.78	82	1.61	nnw.	15.4	1,202	780			
						1,250	873.7	-13.2		82	1.60	nnw.	15.3	1,225	820			
						1,500	845.3	-14.6		87	1.49	nnw.	14.4	1,470	1,105			
1:43	976.3	-5.0	63	nnw.	10.7	1,562	838.8	-14.9	0.54	88	1.47	nnw.	14.2	1,531	1,260		Altitude of St.Cu. base about	
						1,750	818.1	-12.3		84	1.77	nnw.	15.7	1,715	1,650		1,200 m.	
2:22	976.3	-5.0	71	nnw.	8.9	1,988	793.4	-9.1	-1.36	80	2.25	nnw.	17.6	1,948	1,650			
						2,000	792.2	-9.1		80	2.25	nnw.	17.9	1,960	1,650			
						2,250	766.9	-9.3		70	1.93	nnw.	24.3	2,205				
2:25	976.3	-4.9	71	nnw.	9.8	2,349	757.2	-9.4	0.08	66	1.81	nnw.	26.9	2,302				
						2,500	742.4	-9.1		60	1.69	nnw.	26.9	2,450				
2:27	976.2	-4.9	71	nnw.	9.8	2,704	723.2	-8.6	-0.23	52	1.53	nnw.	26.9	2,650				
						2,750	718.7	-8.9		49	1.40	nnw.	27.1	2,694				
2:34	976.3	-4.9	70	nnw.	9.4	2,979	697.8	-10.3	0.70	36	0.91	nnw.	28.0	2,919				
2:45	976.4	-5.0	68	nnw.	8.5	2,771	716.8	-8.7	-0.35	24	0.70	nnw.	28.0	2,715			10/10 St.Cu., nnw.	
						2,750	718.7	-8.8		24	0.69	nnw.	27.7	2,694				
						2,500	742.4	-9.7		21	0.56	nnw.	24.1	2,450				
3:04	976.4	-5.0	67	nnw.	9.8	2,263	765.3	-10.5	0.23	18	0.45	nnw.	20.7	2,218				
						2,250	766.9	-10.5		18	0.45	nnw.	20.6	2,205				
3:11	976.4	-5.2	71	nnw.	8.5	2,002	791.8	-9.9	-1.47	25	0.66	nnw.	18.5	1,962				
						1,750	818.1	-13.6		48	0.90	nnw.	15.5	1,715	1,120			
3:27	976.4	-5.0	71	nnw.	8.9	1,655	828.7	-15.0	0.30	57	0.94	nnw.	14.4	1,622	900			
						1,500	845.3	-14.5		64	1.11	nnw.	13.6	1,470	560			
3:38	976.5	-5.4	75	nnw.	8.5	1,256	873.4	-13.8	0.77	76	1.40	nnw.	12.1	1,231	0		Altitude of St.Cu. base about	
						1,250	873.7	-13.8		76	1.40	nnw.	12.1	1,225	0		1,200 m.	
						1,000	902.7	-11.8		84	1.86	nnw.	13.1	980	0			
3:55	976.5	-5.4	69	nnw.	8.0	804	926.5	-10.3	1.18	90	2.28	nnw.	13.8	788	0		Some ice on wire.	
						750	932.8	-9.7		87	2.32	nnw.	13.2	735	0			
						500	963.1	-6.7		74	2.57	nnw.	10.1	490	0		Light snow.	
4:04	976.5	-5.5	68	nnw.	8.9	396	976.5	-5.5		68	2.61	nnw.	8.9	388			10/10 St.Cu., nnw.	

## OBSERVATIONS AT DREXEL, FEBRUARY, 1916.

39

TABLE 3.—Free-air data from kite flights at Drexel Aerological Station, February, 1916—Concluded.

February 28, 1916.

Surface.						At different heights above sea.												Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity.		Wind.		Potential.				
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.			
P. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.			
2:33	964.6	-2.3	81	w.	4.5	396	964.6	-2.3		81	4.08	w.	4.5	388		2/10 St.Cu., wnw.		
						500	951.5	-3.2		82	3.94	w.	4.8	490	0			
						750	922.0	-5.2		82	3.23	w.	5.4	735	0			
3:40	964.7	-2.1	77	w.	4.5	994	894.0	-7.2	0.82	83	2.76	w.	6.0	975	0			
						1,000	893.2	-7.2		83	2.76	w.	6.0	980				
						1,250	865.0	-8.8		77	2.23	wnw.	7.7	1,225				
4:16	964.9	-2.0	77	w.	4.0	1,434	845.0	-9.9	0.55	72	1.89	nnw.	9.0	1,406		Few St.Cu., wnw.		
						1,250	865.0	-9.0		80	2.27	nnw.	7.9	1,225				
						1,000	893.2	-7.8		91	2.87	nw.	6.3	980				
5:22	965.3	-2.7	79	w.	3.1	983	895.8	-7.7	0.78	92	2.93	nw.	6.2	964	0			
						750	922.4	-5.9		88	3.26	wnw.	5.0	735	0			
						500	952.2	-3.9		84	3.70	wnw.	3.6	490	0			
5:35	965.4	-3.1	82	w.	3.1	396	965.4	-3.1		82	3.86	w.	3.1	338		Few St.Cu., wnw.		

February 29, 1916.

A. M.																
8:35	966.9	-8.8	100	ese.	5.4	396	966.9	-8.8		100	2.89	ese.	5.4	388	10/10 Cl.St., w.; light fog until 10:30 a. m.	
						500	953.8	-9.6		98	2.64	se.	7.1	490	270	
8:43	967.0	-8.7	100	ese.	4.9	506	953.3	-9.6	0.78	98	2.64	se.	7.2	496	280	
8:48	967.1	-8.6	100	ese.	4.9	613	940.4	-6.5	-2.90	98	3.46	sse.	9.0	601	550	
						750	923.4	-7.1		96	3.22	sse.	9.4	735	900	
						1,000	894.2	-8.1		93	2.86	sse.	10.2	980	1,360	4/10 Cl., w.; 5/10 Cl.St., w.; few St., se.
						1,250	866.1	-9.1		90	2.53	s.	11.1	1,225	2,110	
9:21	967.3	-7.8	100	e.	5.4	1,449	844.8	-9.9	0.41	87	2.28	s.	11.7	1,420	2,500	
						1,500	838.8	-9.8		85	2.24	s.	11.5	1,470	2,600	
						1,750	812.1	-9.1		74	2.08	ssw.	10.7	1,715	2,850	
						2,000	786.3	-8.4		64	1.91	sw.	9.9	1,960	2,970	
11:12	966.8	-3.0	76	se.	4.0	2,096	777.2	-8.1	-0.28	60	1.84	sw.	9.6	2,054	3,050	3/10 Cl.St., w.; few Fr.Cu., s.
						2,250	761.3	-8.3		61	1.84	sw.	10.6	2,205	3,300	
						2,500	737.2	-8.6		61	1.79	sw.	12.2	2,450	4,180	
						2,750	713.9	-9.0		61	1.73	sw.	13.8	2,694	4,260	10/10 St.Cu., s.; altitude of St. Cu. base about 1,000 m.
11:51	966.6	-2.8	80	se.	4.0	2,915	699.1	-9.2	0.13	62	1.73	sw.	14.8	2,850	4,430	
						3,000	691.0	-9.6		63	1.69	sw.	15.2	2,939	4,740	
						3,250	669.0	-10.9		66	1.58	sw.	16.4	3,184	5,220	
						3,500	647.3	-12.2		68	1.45	wsww.	17.5	3,429	5,700	
11:55	966.5	-2.6	85	se.	4.5	3,654	635.1	-13.0	0.51	70	1.39	wsww.	18.2	3,579	5,990	
						3,750	626.6	-13.0		70	1.39	wsww.	20.0	3,673	6,170	
11:57	966.5	-2.5	84	se.	4.5	3,855	618.5	-13.0	0.00	69	1.37	wsww.	22.0	3,776	6,370	
						4,000	606.4	-13.7		67	1.25	wsww.	22.8	3,918	6,660	
						4,250	587.1	-15.0		65	1.07	w.	24.0	4,162		
P. M.																
12:05	966.5	-2.1	83	se.	4.5	4,338	580.9	-15.4	0.48	64	1.02	w.	24.5	4,248		
						4,250	587.1	-15.0		63	1.04	w.	24.3	4,162		
						4,000	606.4	-13.8		61	1.12	wnw.	23.6	3,918	6,200	
12:42	965.6	-1.0	76	s.	5.4	3,765	626.1	-12.7	-0.18	59	1.20	wnw.	22.9	3,688	4,500	
						3,750	626.6	-12.7		59	1.20	wnw.	22.9	3,673	4,470	
12:46	965.3	-0.9	75	s.	6.7	3,651	635.1	-12.9	0.40	59	1.18	wnw.	22.9	3,576	4,250	
						3,500	647.3	-12.3		60	1.27	wnw.	21.8	3,429	3,920	
						3,250	669.0	-11.3		62	1.43	w.	19.9	3,184	3,370	
1:02	965.2	-0.8	74	s.	6.3	3,000	691.0	-10.3		64	1.62	w.	18.0	2,939	2,820	
						2,948	695.9	-10.1	0.40	64	1.64	w.	17.6	2,888	2,700	
						2,750	713.9	-9.3		59	1.63	w.	16.6	2,694	2,190	
						2,500	736.7	-8.3		52	1.57	wsww.	15.3	2,450	1,930	
						2,250	760.3	-7.3		45	1.48	wsww.	14.0	2,205	1,670	
1:22	964.7	-0.3	70	s.	7.6	2,204	765.5	-7.1	-1.19	44	1.47	wsww.	13.8	2,160	1,620	
1:27	964.6	-0.3	70	s.	7.6	2,069	778.9	-8.9	0.46	44	1.26	sw.	13.9	2,028	1,480	
						2,000	785.1	-8.6		45	1.32	sw.	14.0	1,990	1,420	
						1,750	810.7	-7.4		46	1.50	ssw.	14.1	1,715	1,200	
						1,500	837.1	-6.3		47	1.69	ssw.	14.2	1,470	950	
1:43	964.2	-1.2	76	s.	7.6	1,337	855.2	-5.5	-1.27	48	1.84	s.	14.3	1,311	670	
						1,250	864.3	-6.6		50	1.75	s.	13.9	1,225	530	
1:50	964.0	-0.7	72	s.	7.1	1,116	879.6	-8.3	0.70	54	1.63	s.	13.4	1,094	360	Altitude of St.Cu. base about 1,000 m.
						1,000	892.1	-7.4		62	2.02	s.	13.0	980	240	
1:58	963.8	-0.6	70	s.	6.7	774	918.7	-5.6	1.27	77	2.93	ssw.	12.1	750	0	
						750	921.0	-5.3		77	3.01	ssw.	11.8	735	0	Considerable ice on wire.
						500	950.2	-2.1		73	3.74	s.	8.8	490	0	
2:04	963.8	-0.8	71	s.	7.6	396	963.8	-0.8		71	4.05	s.	7.6	388		Few Cl., w.; 8/10 St.Cu., s.



TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916.

March 1, 1916 (No. 1).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. lty.	Electric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
1:16.....	963.1	-7.8	88	nnw.	7.1	396	963.1	-7.8	.....	88	2.77	nnw.	7.1	388	.....	10/10 St., nnw.
1:19.....	963.1	-7.8	88	nnw.	7.6	500	950.0	-9.1	.....	88	2.47	nnw.	8.2	490	90	Altitude of St. base about 750 m.
1:24.....	963.1	-7.7	88	nnw.	6.3	739	921.2	-10.9	0.91	88	2.10	nnw.	9.6	725	260	
1:55.....	962.8	-8.1	91	nnw.	7.1	750	920.0	-10.7	.....	88	2.15	nnw.	9.7	735	320	
2:11.....	962.9	-8.1	88	n.	8.9	907	901.6	-8.4	-1.49	89	2.06	nnw.	10.8	889	900	
2:16.....	962.9	-8.0	89	n.	8.0	1,000	890.6	-7.9	.....	88	2.75	nnw.	.....	980	.....	Considerable ice on wire.
2:23.....	963.0	-7.9	91	n.	10.2	1,059	883.8	-7.6	-0.22	88	2.82	nnw.	.....	1,038	.....	
						1,000	890.6	-7.5	.....	88	2.87	nnw.	.....	980	350	
						797	914.1	-7.4	-4.59	90	2.93	nnw.	.....	781	250	
						750	920.0	-9.6	.....	90	2.42	nnw.	.....	735	220	
						723	923.0	-10.8	0.59	90	2.18	nnw.	11.5	709	200	Altitude of St. base about 750 m.
						500	950.0	-8.8	.....	91	2.63	n.	10.6	490	70	
						396	963.0	-7.9	.....	91	2.84	n.	10.2	388	.....	10/10 St., nnw.

March 1, 1916 (No. 2).

F. M.																
3:06.....	963.3	-7.6	88	n.	8.9	396	963.3	-7.6	88	2.82	n.	8.9	388	.....	10/10 St., nnw.	
						500	950.1	-8.3	87	2.63	n.	9.1	490	90	Altitude of St. base about 750 m.	
3:06.....	963.3	-7.6	88	n.	8.5	699	926.3	-9.6	0.66	84	2.26	n.	9.6	685	240	
						750	920.0	-8.9	85	2.43	n.	9.7	735	280		
3:08.....	963.3	-7.5	88	n.	8.9	895	903.2	-6.9	-1.38	86	2.03	n.	10.1	877	380	
						1,000	891.2	-7.4	86	2.80	n.	9.5	980	430		
						1,250	863.1	-8.5	86	2.55	n.	7.9	1,225	520		
3:31.....	963.7	-7.6	88	n.	7.6	1,258	862.6	-8.5	0.44	86	2.55	n.	7.9	1,233	520	
						1,500	835.8	-9.4	86	2.36	n.	7.4	1,470	360		
						1,750	809.2	-10.3	85	2.15	n.	6.9	1,715	.....		
3:37.....	963.7	-7.6	88	n.	8.5	1,813	802.7	-10.5	0.37	85	2.11	n.	6.8	1,777	.....	
						1,750	809.2	-10.3	85	2.15	n.	6.7	1,715	.....		
						1,500	835.8	-9.4	85	2.33	n.	6.4	1,470	.....		
						1,250	863.1	-8.4	86	2.57	n.	6.2	1,225	.....		
3:46.....	963.9	-7.6	88	n.	6.3	1,100	880.1	-7.8	0.11	86	2.71	n.	6.0	1,078	.....	
						1,000	891.4	-7.7	86	2.73	n.	8.4	980	.....		
3:50.....	964.0	-7.6	88	n.	8.0	915	901.4	-7.6	-1.12	86	2.76	n.	10.4	897	.....	Some ice on wire.
						750	920.9	-9.4	86	2.36	n.	9.9	735	0		
3:59.....	964.1	-7.8	88	n.	8.9	674	930.1	-10.3	0.90	86	2.18	n.	9.7	661	0	Altitude of St. base about 900 m.
						500	951.3	-8.7	87	2.53	n.	9.2	490	0		
4:03.....	964.2	-7.8	88	n.	8.9	396	964.2	-7.8	88	2.77	n.	8.9	388	.....	10/10 St., nnw.	

March 2, 1916.

A. M.																	
8:42.....	975.4	-17.8	100	nne.	5.4	396	975.4	-17.8	.....	100	1.27	nne.	5.4	338	.....	3/10 Cl., nw.	
						500	962.2	-16.7	.....	100	1.41	nne.	6.5	490	0		
8:44.....	975.4	-17.8	100	nne.	5.4	559	954.4	-16.1	-1.04	100	1.49	nne.	7.1	548	0		
						750	930.5	-15.4	.....	100	1.59	ne.	9.0	735	0		Parhelia 8:46 to 8:58 a. m.
8:55.....	975.6	-17.6	100	nne.	6.3	868	916.2	-15.0	-0.36	100	1.65	ne.	10.2	851	100		
						1,000	900.5	-14.5	.....	100	1.73	ne.	8.2	980	620		
						1,250	871.8	-13.4	.....	100	1.91	ne.	4.4	1,225	.....	2/10 Cl., w.	
10:44.....	975.7	-15.0	100	nne.	5.8	1,278	868.4	-13.3	-0.32	100	1.93	ne.	4.0	1,263	.....		
						1,250	871.8	-13.4	.....	100	1.91	ne.	4.4	1,225	.....		
						1,000	901.1	-13.9	.....	100	1.83	ne.	8.4	980	1,410		
11:02.....	975.7	-14.4	100	nne.	5.4	800	925.1	-14.4	-0.34	100	1.74	ne.	11.6	784	1,000		
						750	931.0	-14.6	.....	100	1.71	ne.	11.0	735	750		
11:10.....	975.7	-14.2	100	nne.	6.3	564	954.4	-15.2	0.60	100	1.62	nne.	8.7	553	440		
						500	962.4	-14.8	.....	100	1.68	nne.	7.9	490	330		
11:11.....	975.7	-14.2	100	nne.	6.7	396	975.7	-14.2	.....	100	1.78	nne.	6.7	388	.....	4/10 Cl., w.	

March 3, 1916.

A. M.																	
8:58.....	983.4	-15.2	95	w.	4.5	396	983.4	-15.2	.....	95	1.54	w.	4.5	388	.....	Cloudless.	
						500	970.0	-15.3	.....	96	1.54	wnw.	6.3	490	.....	190	
9:02.....	983.4	-14.9	98	w.	5.4	610	957.2	-15.5	0.14	98	1.54	wnw.	8.2	598	.....	310	
9:04.....	983.4	-14.8	99	w.	5.4	644	951.7	-14.7	-2.35	98	1.67	nw.	8.8	631	.....	350	
						750	938.4	-15.0	.....	97	1.60	nw.	9.5	735	.....	470	
						1,000	907.6	-15.8	.....	94	1.44	nnw.	11.2	980	.....	1,140	
9:24.....	983.3	-13.7	95	w.	4.9	1,231	880.5	-16.5	0.31	92	1.32	nnw.	12.8	1,207	.....	1,800	
						1,250	878.3	-16.1	.....	91	1.36	nnw.	13.1	1,225	.....	1,900	
						1,500	849.5	-10.8	.....	82	1.98	nnw.	16.7	1,470	.....	2,820	
9:33.....	983.3	-13.3	94	w.	4.9	1,521	847.6	-10.4	-2.10	81	2.03	nnw.	17.0	1,491	.....	2,900	
						1,750	822.1	-9.9	.....	75	1.96	nw.	18.6	1,715	.....	3,350	
9:50.....	983.2	-12.8	92	w.	5.4	1,931	803.7	-9.5	-0.22	70	1.90	nw.	19.8	1,893	.....	3,700	
						2,000	796.3	-9.8	.....	70	1.85	nw.	21.2	1,960	.....	3,700	
10:27.....	983.0	-11.0	86	w.	3.6	2,195	777.2	-10.7	0.49	71	1.73	nw.	25.3	2,151	.....	.....	
						2,000	796.3	-9.7	.....	69	1.84	nw.	23.0	1,960	.....	3,250	
						1,750	822.1	-8.4	.....	66	1.97	nw.	20.2	1,715	.....	2,350	
11:15.....	982.7	-9.9	77	w.	3.6	1,529	847.6	-7.2	-0.74	63	2.09	nw.	17.6	1,499	.....	1,500	
						1,500	849.5	-7.4	.....	63	2.05	nw.	17.1	1,470	.....	1,440	
11:23.....	982.7	-10.2	72	w.	4.0	1,247	978.8	-9.3	-2.55	63	1.74	nw.	13.2	1,222	.....	920	
						1,000	907.5	-15.6	.....	64	1.00	nw.	8.2	980	.....	670	
11:28.....	982.7	-9.9	70	w.	4.0	992	908.6	-15.8	0.70	64	0.98	nw.	8.0	973	.....	650	
						750	937.8	-13.9	.....	66	1.21	wnw.	6.9	735	.....	410	
11:36.....	982.6	-9.3	70	w.	4.0	612	955.3	-12.8	1.70	67	1.35	wnw.	6.3	600	.....	270	
						500	969.5	-10.8	.....	69	1.67	wnw.	5.8	490	.....	160	
11:39.....	982.6	-9.0	70	w.	5.4	396	982.6	-9.0	.....	70	1.99	w.	5.4	388	.....	Cloudless.	

## OBSERVATIONS AT DREXEL, MARCH, 1916.

41

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 4, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Relative humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.	m. p. s.	10 <sup>6</sup> ergs.	volts.		
8:35	964.7	-2.3	75	sw.	6.3	396	964.7	-2.3		75	3.78	sw.	6.3	388	2/10 Cl. St., wnw.; 1/10 Cl., wnw.	
						500	952.2	1.4		70	4.73	wsnw.	9.1	490	0	
						750	923.8	10.2		54	7.10	wnw.	15.8	735	0	
8:38	964.7	-1.7	76	sw.	6.3	775	920.8	11.1	-3.54	55	7.40	nw.	16.5	760	0	
						1,000	895.8	9.9		50	6.10	wnw.	17.8	980	260	
						1,250	869.2	8.6		43	4.80	wnw.	19.2	1,225	540	
9:00	964.8	0.3	69	sw.	6.7	1,375	856.8	7.9	0.53	40	4.26	w.	19.9	1,348	690	
						1,500	843.8	8.6		34	3.80	w.	19.8	1,470	820	
9:01	964.8	0.4	68	sw.	7.1	1,509	842.9	8.7	-0.60	34	3.82	w.	19.8	1,479	830	
						1,750	818.8	7.7		28	2.94	wnw.	21.7	1,715	1,130	
9:11	964.8	1.0	67	sw.	7.6	1,834	810.3	7.3	0.43	26	2.66	wnw.	22.3	1,798	1,240	
						2,000	794.1	5.3		27	2.41	wnw.	22.1	1,960	1,460	
9:21	964.9	1.2	64	sw.	6.7	2,076	786.7	4.4	1.20	27	2.26	wnw.	22.0	2,034	1,550	
						2,250	770.2	3.1		28	2.14	wnw.	22.8	2,205	1,790	
						2,500	746.9	1.1		28	1.85	wnw.	23.9	2,450	2,120	
9:31	964.9	2.3	61	sw.	4.9	2,569	740.3	0.6	0.77	29	1.85	wnw.	24.2	2,517	2,200	
						2,750	723.9	-1.0		26	2.02	wnw.		2,694	2,340	
						3,000	701.2	-3.2		45	2.11	wnw.		2,939		
10:06	965.0	4.2	56	sw.	5.4	3,180	685.5	-4.8	0.88	52	2.12	wnw.		3,115		

March 5, 1916.

A. M.															
9:50	963.6	0.6	79	se.	8.0	396	963.6	0.6	79	5.04	se.	8.0	388	10/10 St.Cu., w.	
						500	951.0	0.1	80	4.92	se.	8.5	490		
9:51	963.6	0.7	79	se.	8.5	677	930.5	-0.8	0.50	82	4.68	se.	9.4	664	
						750	921.9	2.0		72	5.08	se.	9.8	735	
10:02	963.4	0.8	80	se.	9.8	978	896.3	10.8	-3.85	42	5.44	se.	11.0	959	
						1,000	893.9	10.7		41	5.28	se.	11.0	980	
						1,250	867.0	9.8		34	4.12	se.	11.0	1,225	
						1,500	841.2	8.9		26	2.96	se.	11.0	1,470	
10:31	962.8	1.2	79	se.	8.5	1,647	826.3	8.4	0.35	21	2.31	se.	11.0	1,614	4/10 A.St., w.; 3/10 A.Cu., w.;
10:45	963.1	1.3	79	se.	10.7	1,720	819.4	9.2	-1.10	20	2.33	s.	9.4	1,686	3/10 St.Cu., wsw.
						1,750	816.2	8.9		20	2.28	s.	9.8	1,715	
						2,000	791.7	6.8		23	2.27	s.	12.8	1,960	
						2,250	767.7	4.6		26	2.20	sw.	15.9	2,205	
10:59	962.2	1.9	81	se.	9.8	2,375	755.8	3.5	0.87	28	2.20	sw.	17.4	2,328	
						2,500	744.1	2.7		29	2.15	sw.	17.6	2,450	
						2,750	721.2	1.2		32	2.13	sw.	18.1	2,694	
						3,000	699.1	-0.4		34	2.01	sw.	18.6	2,939	
11:11	961.8	2.4	80	se.	8.5	3,169	684.6	-1.4	0.62	35	1.90	sw.	18.9	3,105	
						3,250	677.4	-2.1		38	1.95	sw.	19.0	3,184	
						3,500	656.3	-4.4		46	1.94	wsnw.	19.1	3,429	10/10 A.St., w.
11:40	960.8	3.8	76	se.	8.9	3,741	636.2	-4.5	0.89	54	1.91	wsnw.	19.3	3,664	Altitude of A.St. base about
						3,750	635.8	-6.4		55	1.96	wsnw.	19.3	3,673	3,900 m.
11:42	960.7	3.8	76	se.	8.9	3,857	627.0	-5.1	-1.21	64	2.55	w.	19.3	3,778	
						4,000	615.8	-6.3		73	2.62	w.	19.8	3,918	
						4,250	596.5	-8.3		88	2.66	w.	20.6	4,162	
P. M.															
12:01	960.1	4.5	74	se.	10.2	4,343	589.3	-9.1	0.78	94	2.64	w.	20.9	4,253	4,300
						4,250	596.5	-8.4		91	2.72	w.	20.6	4,162	4,170
						4,000	615.8	-6.6		82	2.87	w.	19.8	3,918	3,830
						3,750	635.8	-4.7		73	3.01	wsnw.	19.1	3,673	3,480
						3,500	655.9	-2.8		64	3.10	wsnw.	18.3	3,429	3,140
12:40	959.0	6.3	71	se.	10.7	3,269	675.2	-1.1	0.76	56	3.12	wsnw.	17.6	3,202	2,800
						3,250	676.3	-0.9		55	3.12	wsnw.	17.6	3,184	2,780
						3,000	697.6	1.0		46	3.02	sw.	17.6	2,939	2,470
						2,750	719.2	2.9		37	2.79	sw.	17.6	2,694	2,180
12:55	958.5	6.6	70	se.	8.0	2,732	721.5	3.0	0.68	36	2.73	sw.	17.6	2,677	2,150
						2,500	741.8	4.6		34	2.88	sw.	16.9	2,450	1,920
						2,250	765.0	6.3		31	2.96	sw.	16.2	2,205	1,680
1:12	957.9	6.4	69	se.	8.5	2,116	777.4	7.2	0.56	30	3.05	s.	15.8	2,074	1,550
						2,000	788.6	7.8		29	3.07	s.	15.4	1,960	1,420
1:18	957.7	6.8	69	se.	8.0	1,793	809.3	9.0	-0.42	26	2.98	s.	14.8	1,757	1,170
						1,750	813.0	8.8		28	2.95	s.	14.8	1,715	1,120
1:19	957.7	6.8	69	se.	8.0	1,698	817.7	8.6	0.40	25	2.80	s.	14.8	1,664	1,050
						1,500	837.4	9.4		29	3.42	s.	14.9	1,470	940
						1,250	862.6	10.4		35	4.41	se.	15.0	1,225	790
1:39	956.9	7.2	69	se.	7.6	1,094	878.6	11.0	-3.16	38	4.99	se.	15.1	1,073	620
						1,000	888.7	8.0		46	4.94	se.	14.2	980	340
1:44	956.7	7.3	68	se.	8.5	831	907.1	2.7	0.99	61	4.53	se.	12.6	815	0
						750	916.1	3.5		63	4.95	se.	12.2	735	0
						500	944.4	6.0		69	6.45	se.	10.8	490	0
1:53	956.4	7.0	72	se.	10.2	396	956.4	7.0		72	7.21	se.	10.2	388	1/10 Cl.St., w.; 3/10 Cl.Cu., wsw.

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 6, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tudo.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%	nw.	m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
9:01	948.9	4.3	75	nw.	12.5	396	948.9	4.3		75	6.23	nw.	12.5	388		10/10 St.Cu., nw.
						500	938.3	3.1		80	6.10	nw.	14.6	490	0	Clouds moving rapidly.
						750	908.1	0.3		91	5.68	nw.	19.6	735	0	
9:11	949.0	4.1	72	nw.	13.0	965	884.1	-2.1	1.12	100	5.13	nw.	23.9	946	20	
						1,000	880.3	-2.3		100	5.04	nw.	23.8	980	120	Altitude of A.St. base about 1,050 m.
9:25	949.2	4.0	74	nw.	13.9	1,194	859.2	-3.2	0.48	100	4.68	nw.	23.1	1,171	515	
						1,250	853.2	-2.3		94	4.74	nw.	22.9	1,225	610	
						1,500	827.0	1.5		65	4.43	wnw.	21.8	1,470	840	
9:32	949.3	3.9	75	nw.	11.2	1,562	820.7	2.5	-1.55	58	4.24	wnw.	21.5	1,531	900	
						1,750	801.9	1.3		58	3.89	wnw.	20.0	1,715	980	
						2,000	777.1	-0.3		57	3.40	w.	17.9	1,960	940	10/10 St.Cu., nw.
10:10	949.7	4.1	68	nw.	10.7	2,135	764.5	-1.1	0.63	57	3.17	w.	16.8	2,092	920	
						2,250	753.1	-0.7		48	2.76	w.	16.8	2,205	1,010	
10:13	949.7	4.1	68	nw.	10.2	2,365	742.8	-0.3	-0.35	40	2.38	wsu.	16.8	2,317	1,100	
						2,500	730.0	-1.3		34	1.86	wsu.	17.9	2,450	1,200	
						2,750	707.2	-3.1		23	1.08	wsu.	20.1	2,694	1,380	
10:29	949.8	4.6	69	nw.	10.2	2,790	703.6	-3.4	0.55	21	0.97	wsu.	20.4	2,734	1,400	
						2,750	707.2	-3.3				wsu.	20.3	2,694	1,390	
						2,500	729.7	-2.3				w.	19.7	2,450	1,120	
10:46	949.9	4.9	64	nw.	10.2	2,301	747.9	-1.6	-1.60			w.	19.2	2,255	900	
						2,250	752.9	-2.4				w.	18.5	2,205	860	
11:13	950.1	5.0	59	nw.	11.6	2,182	759.5	-3.5	0.55			w.	17.6	2,138	780	4/10 Cl.St., wsw.; 6/10 St. Cu.,nw.
						2,000	776.9	-2.5				w.	18.4	1,960	700	
						1,750	802.1	-1.1				wnw.	19.4	1,715	600	
11:24	950.2	4.8	59	nw.	15.2	1,601	817.2	-0.3	-1.19	27	1.61	wnw.	20.0	1,569	530	
						1,500	827.8	-1.5		30	1.62	wnw.	20.0	1,470	490	
						1,250	854.1	-4.5		38	1.59	wnw.	20.0	1,225	370	
11:26	950.3	4.8	58	nw.	15.2	1,239	855.6	-4.6	1.12	38	1.58	wnw.	20.0	1,215	370	
						1,000	881.3	-1.9		51	2.66	nw.	20.0	980	270	
11:38	950.4	4.7	58	nw.	15.2	785	905.7	0.5	1.26	66	4.18	nw.	20.0	770	170	
						750	909.3	0.9		65	4.24	nw.	19.4	735	160	
						500	938.0	4.1		60	4.91	nw.	15.2	490	50	
11:51	950.5	5.4	58	nw.	13.4	396	950.5	5.4		58	5.20	nw.	13.4	388		4/10 St.Cu., nw.

March 7, 1916.

P. M.																	
12:55	965.5	-2.0	59	nw.	11.6	396	965.5	- 2.0	-----	59	3.05	nw.	11.6	388	-----	9/10 St.Cu., nw.	
						500	952.9	- 3.2	-----	63	2.95	nw.	14.4	490	150	Light snow.	
						750	923.1	- 5.9	-----	74	2.75	nw.	21.1	735	500		
1:02	965.6	-1.6	56	nw.	13.9	782	919.6	- 6.3	1.11	75	2.69	nw.	22.0	767	540		
						1,000	894.0	- 8.4	-----	80	2.39	nw.	22.0	980	500	Altitude of St.Cu. base about 1,050 m.	
1:12	965.6	-2.0	59	nw.	13.4	1,184	873.1	-10.1	0.95	84	2.16	nw.	22.0	1,161	460	7/10 St.Cu., nw.	
						1,250	865.8	-10.6	-----	88	2.16	nw.	22.3	1,225	640		
1:22	965.7	-1.7	62	nw.	13.4	1,423	846.7	-12.0	0.79	98	2.13	nw.	23.1	1,395	1,100		
						1,500	838.0	-12.5	-----	99	2.05	nw.	-----	1,470	1,220		
						1,750	811.0	-14.2	-----	99	1.76	nw.	-----	1,715	1,580	10/10 St.Cu., nw.	
1:31	965.7	-2.0	58	nw.	12.5	1,836	802.0	-14.8	0.68	100	1.68	nw.	-----	1,799	1,700	Kites broke away.	

March 8, 1916 (No. 1).

A. M.																
9:13	973.1	-4.3	65	wnw.	4.9	396	973.1	-4.3		65	2.77	wnw.	4.9	388		6/10 Cl.St., n.
						500	959.9	-5.3		65	2.54	wnw.	5.4	490	0	
						750	929.6	-7.0		66	2.06	w.	6.7	735	0	
9:42	972.8	-3.1	64	wnw.	4.9	803	923.6	-8.4	1.20	66	1.97	w.	7.0	787		
						750	929.6	-7.7		65	2.07	w.	6.6	635		
						500	759.6	-4.2		62	2.67	wnw.	4.8	490		
10:14	972.5	-2.8	61	wnw.	4.0	396	972.5	-2.8		61	2.95	wnw.	4.0	388		9/10 Cl., n.

March 8, 1916 (No. 2).

P. M.																	
1:13	969.5	1.2	46	s.	4.0	396	969.5	1.2		46	3.06	s.	4.0	388	-----	2/10 Cl.St., n; 5/10 A.St., n;	
						500	956.8	- 0.3		48	2.86	s.	4.7	490	0	3/10 St.Cu., n.	
1:25	969.3	1.3	50	s.	4.9	702	932.8	- 3.2	1.44	51	2.39	ssw.	6.1	688	0		
						750	927.0	- 3.5		52	2.37	sw.	6.3	735	0		
						1,000	897.8	- 5.2		60	2.36	sw.	7.2	980	0		
2:05	968.6	1.1	53	s.	6.3	1,035	893.7	- 5.4	0.66	61	2.37	sw.	7.3	1,015	0	2/10 Cl.St., n; 8/10 A.St., n.	
2:07	968.5	1.1	52	s.	6.3	1,145	881.1	- 3.8	-1.45	59	2.62	w.	7.3	1,122	0		
2:28	968.4	1.0	54	s.	5.8	1,254	868.9	- 5.8	1.83	53	1.99	w.	9.5	1,229	0		
2:30	968.4	1.1	54	s.	5.8	1,376	855.5	- 4.7	-0.90	51	2.10	w.	9.5	1,349	0	10/10 A.St., n.	
						1,500	841.6	- 5.3		52	2.03	w.	9.6	1,470	50		
						1,750	815.3	- 6.4		54	1.92	wnw.	9.9	1,715	360		
						2,000	789.8	- 7.6		57	1.83	wnw.	10.2	1,960	670		
						2,250	765.0	- 8.8		60	1.73	wnw.	10.4	2,205	980		
						2,500	740.2	-10.0		62	1.61	nw.	10.7	2,450	1,290		
3:22	967.9	1.7	57	s.	5.8	2,510	739.4	-10.0	0.47	62	1.61	nw.	10.7	2,460	1,300	10/10 St.Cu., nw.	
						2,750	716.4	-10.9		72	1.72	nw.	14.2	2,694	1,680	Altitude of St.Cu. base about 2,500 m.	
						3,000	693.4	-11.8		83	1.83	nw.	17.8	2,939	2,070		
3:38	967.7	2.1	53	s.	4.9	3,153	679.7	-12.3	0.36	89	1.88	nw.	20.0	3,089	2,300	Kites broke away.	



## OBSERVATIONS AT DREXEL, MARCH, 1916.

43

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 9, 1916 (No. 1).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap- pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.	m. p. s.	10 <sup>6</sup> ergs.	volts.		
10:08	964.6	5.2	86	sw.	6.7	396	964.6	5.2		86	7.61	sw.	6.7	388	8/10 Cl.St., nw.; 1/10 A.St., nw	
						500	952.3	4.0		88	7.15	sw.	9.2	490	0	
10:11	964.5	5.4	85	sw.	6.3	542	947.3	3.5	1.16	89	6.99	sw.	10.2	531	0	
						750	923.8	8.9		55	6.27	WSW.	15.2	735	0	
10:13	964.5	5.5	85	sw.	6.3	761	922.5	9.2	-2.60	53	6.17	WSW.	15.5	746	0	
						1,000	896.2	8.2		49	5.33	w.	15.5	980	0	
10:27	964.4	6.3	82	sw.	6.3	1,224	872.1	7.3	0.41	46	4.71	WNW.	15.5	1,200	0	
						1,250	869.4	7.1		46	4.64	WNW.	15.6	1,225	30	
						1,500	843.2	5.4		44	3.95	WNW.	16.6	1,470	290	
						1,750	817.7	3.8		43	3.45	WNW.	17.5	1,715	460	
						2,000	792.5	2.2		42	3.01	WNW.	18.5	1,960	600	
10:58	964.2	8.7	73	WSW.	7.6	2,086	784.2	1.6	0.66	41	2.81	WNW.	18.7	2,044	640	
						2,250	768.0	0.7		40	2.57	WNW.	19.6	2,205	780	
						2,500	744.1	-0.7		39	2.25	WNW.	20.9	2,450	960	
						2,750	721.2	-2.1		38	1.95	nw.	22.2	2,694	1,020	
						3,000	698.9	-3.5		37	1.69	nw.	23.5	2,939	1,050	
11:27	963.9	10.5	66	w.	7.1	3,018	697.5	-3.6	0.56	37	1.67	nw.	23.6	2,957	1,050	
						3,250	677.1	-5.1		37	1.47	nw.	24.6	3,184	1,130	
						3,500	655.8	-6.8		38	1.31	nw.	25.6	3,429	1,230	
						3,750	635.2	-8.5		38	1.12	nw.	26.7	3,673	1,300	
11:51	963.5	11.9	57	WSW.	8.9	3,866	625.7	-9.2	0.66	38	1.06	nw.	27.1	3,787	1,340	
															8/10 Cl., nw.; 2/10 Cl., nw.	
P. M.																
12:02	963.4	12.5	51	w.	8.9	3,890	623.7	-8.7	-2.08	37	1.08	nw.	27.1	3,810	1,340	
						4,000	614.8	-9.5		40	1.08	nw.	25.1	3,918	1,370	
12:25	962.9	13.2	49	WSW.	10.2	4,101	606.3	-10.2	0.71	42	1.07	nw.	23.3	4,017	1,400	
															Kites broke away.	

March 9, 1916 (No. 2).

P. M.																	
2:08	960.6	16.8	39	WSW.	9.4	396	960.6	16.8		39	7.46	WSW.	9.4	388			9/10 Cl., nnw.
						500	943.8	15.9		39	7.05	WSW.	10.4	490			
						750	921.1	13.7		38	5.96	WSW.	12.9	735			
2:17	960.5	16.6	37	W.	8.9	822	913.2	13.1	0.87	38	5.73	WSW.	13.6	806			
						1,000	893.8	11.8		38	5.26	WSW.	15.7	980			
2:27	960.4	16.9	38	WSW.	10.2	1,179	874.9	10.4	0.76	39	4.92	W.	17.9	1,156			
						1,250	867.1	10.0		40	4.91	W.	18.1	1,225			
						1,500	841.2	8.4		41	4.52	W.	18.7	1,470			
2:41	960.3	16.9	40	WSW.	9.8	1,529	838.7	8.2	0.63	41	4.46	W.	18.8	1,499			10/10 Cl.St., nw.
						1,750	816.0	6.3		45	4.30	W.	19.7	1,715			
						2,000	791.5	4.2		50	4.12	WNW.	20.8	1,960			
						2,250	767.5	2.0		55	3.88	WNW.	21.9	2,205			
3:02	960.2	16.7	41	WNW.	8.0	2,330	759.8	1.3	0.72	57	3.82	WNW.	22.1	2,283			
						2,250	767.5	1.8		57	3.97	WNW.	22.0	2,205			
						2,000	791.3	3.2		57	4.38	WNW.	21.6	1,960			
						1,750	815.3	4.7		57	4.87	W.	21.1	1,715			
3:20	960.1	16.2	43	WNW.	8.5	1,542	836.4	5.9	0.66	57	5.30	W.	20.7	1,511			
						1,500	840.3	6.2		56	5.31	W.	20.5	1,470			
						1,250	866.3	7.8		55	5.82	W.	19.5	1,225			
3:31	960.0	16.2	42	WNW.	6.7	1,196	872.6	8.2	0.94	54	5.87	W.	19.3	1,173			
						1,000	892.7	10.1		53	6.55	W.	18.3	980			
3:41	959.9	16.0	43	W.	7.6	815	913.2	11.8	0.95	53	7.34	W.	17.4	799			
						750	919.9	12.4		52	7.49	W.	16.0	735			
						500	947.8	14.8		46	7.74	W.	10.7	490			
3:50	959.8	15.8	44	W.	8.5	396	959.8	15.8		44	7.90	W.	8.5	388			4/10 Cl.St., nw.; 6/10 A.St., nw.

March 10, 1916.

A. M.																	
9:08	975.4	- 3.3	72	nne.	5.4	396	975.4	- 3.8		72	3.20	nne.	5.4	388			8/10 St.Cu., n.
						500	962.5	- 5.0		74	2.97	nne.	6.4	490	0		
9:18	975.6	- 3.4	69	n.	5.4	733	934.5	- 7.8	1.19	80	2.52	n.	8.6	719	0		
						750	933.8	- 7.8		79	2.49	n.	8.8	735	20		
						1,000	903.2	- 8.4		71	2.12	n.	12.3	960	240		
9:35	976.0	- 3.0	61	n.	6.3	1,250	874.7	- 8.9		63	1.80	n.	15.8	1,225	470		
						1,297	869.4	- 9.0	0.21	61	1.73	n.	16.4	1,271	560		
9:37	976.0	- 3.0	61	n.	5.8	1,500	847.1	- 5.1		53	2.11	n.	20.2	1,470	900		
9:48	976.2	- 3.0	64	n.	5.4	1,517	845.1	- 4.7	-1.95	52	2.14	n.	20.5	1,487	920		3/10 Cl.St., nw.; 2/10 St.Cu., n.
						1,748	821.0	- 6.3	0.69	93	3.34	nnw.	21.4	1,713	1,210		
10:02	976.4	- 2.9	69	n.	6.3	2,000	795.2	- 3.7		81	3.63	nnw.	22.6	1,960	1,420		
						2,170	778.4	- 2.0	-1.02	73	3.77	nnw.	23.4	2,127	1,600		
						2,250	770.7	- 2.6		74	3.64	nnw.	23.5	2,205	1,700		
10:20	976.4	- 2.5	69	nne.	6.3	2,500	746.7	- 4.4		76	3.21	nnw.	23.8	2,450	1,990		
						2,510	745.7	- 4.5	0.74	76	3.18	nnw.	23.8	2,460	2,000		2/10 Cl.St., nw.; 2/10 A.Cu., nw.
						2,750	723.0	- 5.5		81	3.11	nnw.	25.0	2,694	2,350		
10:41	976.4	- 2.5	66	nne.	6.3	3,000	700.4	- 6.6		85	2.98	nw.	32.4	2,939	2,710		Solar halo with parhelia from 10:21 to 10:30 a. m.
						3,202	682.5	- 7.4	0.36	89	2.90	nw.	36.0	3,137	3,000		
11:12	976.4	- 2.3	60	nne.	5.4	3,000	700.4	- 6.8		89	3.06	nw.	31.5	2,939	2,550		
						2,754	722.8	- 6.0	0.52	89	3.28	nw.	26.1	2,698	2,000		5/10 Cl.St., nw.
						2,500	746.7	- 4.7		83	3.42	nw.	24.2	2,450	1,750		
11:36	976.5	- 1.9	55	nne.	5.4	2,250	770.7	- 3.4		77	3.54	nnw.	22.2	2,205	1,410		
						2,076	787.8	- 2.5	-0.93	73	3.62	nnw.	20.8	2,034	1,200		3/10 Cl., wnw.; 6/10 Cl.St., nw.
						2,000	795.2	- 3.2		68	3.18	nnw.	19.9	1,960	1,150		
11:44	976.5	- 2.5	56	nne.	6.3	1,750	820.8	- 5.5		53	2.04	n.	17.0	1,715	950		
11:52	976.6	- 2.3	56	n.	5.4	1,635	833.0	- 6.6	0.00	46	1.61	n.	15.7	1,602	920		
						1,547	842.7	- 6.6	-0.88	34	1.19	n.	16.1	1,516	860		3/10 Cl.St., wnw.; 6/10 A.St., nw.
						1,500	847.6	- 7.0		34	1.15	n.	15.1	1,470	830		
						1,250	875.3	- 9.2		35	0.98	n.	9.7	1,225	620		
11:55	976.6	- 2.4	58	n.	5.4	1,217	879.2	- 9.5	0.67	35	0.95	n.	9.0	1,193	600		
						1,000	904.1	- 8.0		54	1.67	n.	9.0	880	300		
P. M.																	
12:14	976.7	- 1.9	54	n.	4.9	830	924.3	- 6.9	1.11	68	2.32	n.	9.0	814	0		Solar halo 12:02 to 12:13 p. m.
						750	932.5	- 6.0		65	2.39	n.	8.2	735	0		
						500	963.8	- 3.3		57	2.64	n.	5.9	490	0		
12:20	976.7	- 2.1	53	n.	4.9	396	976.7	- 2.1		53	2.72	n.	4.9	388			9/10 Cl.St., nw.

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 11, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap- pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.	m. p. s.	10° ergs.	volts.		
8:46	976.8	-0.6	72	SSW.	9.8	396	976.8	-0.6		72	4.18	SSW.	9.8	388	6/10 Cl., nw.	
8:47	976.8	-0.6	72	SSW.	9.8	461	968.8	-1.5	1.38	66	3.56	SW.	10.8	452	0	
						500	964.0	-1.2		66	3.65	SW.	11.4	490	0	
						750	934.1	0.9		64	4.17	WSW.	15.5	735	0	
8:50	976.8	-0.6	73	SSW.	9.8	780	930.9	1.2	-0.85	64	4.26	WSW.	16.0	765	0	
						1,000	905.4	2.8		68	5.08	W.	16.8	980	490	
9:05	976.6	-0.2	74	SW.	8.0	1,219	881.9	4.4	-0.73	72	6.03	W.	16.8	1,195	1,000	
						1,250	878.1	4.1		72	5.90	W.	16.8	1,225	1,060	
9:10	976.6	0.6	68	SSW.	8.5	1,392	863.3	2.8	0.92	71	5.30	W.	16.7	1,365	1,250	
						1,500	851.9	4.2		50	4.12	W.	15.0	1,470	1,380	
9:17	976.5	0.8	68	SSW.	10.7	1,514	850.2	4.4	-1.31	47	3.96	W.	14.8	1,484	1,400	
						1,750	826.2	3.0		47	3.56	W.	15.5	1,715	1,510	
						2,000	801.0	1.5		46	3.13	WNW.	16.3	1,960	1,740	
9:30	976.5	0.9	66	SSW.	11.2	2,056	795.2	1.2	0.59	46	3.06	WNW.	16.5	2,015	1,800	
						2,250	776.2	-0.1		48	2.91	WNW.	18.3	2,205	1,990	
						2,500	752.5	-1.7		51	2.70	NW.	20.5	2,450	2,230	
9:55	976.4	2.4	61	SSW.	10.7	2,630	740.3	-2.5	0.64	53	2.63	NW.	21.7	2,577	2,360	
						2,750	729.2	-3.4		60	2.76	NW.	20.4	2,694	2,450	
10:11	976.3	3.0	57	SSW.	10.3	2,985	707.5	-5.3	0.70	74	2.89	NW.	17.8	2,924	2,600	
						3,000	706.0	-5.4		74	2.87	NW.	17.9	2,939	2,640	
						3,250	683.2	-7.1		82	2.75	NW.	19.6	3,184	2,990	
						3,500	661.1	-8.8		89	2.57	NW.	21.2	3,429	3,340	
10:31	975.7	4.4	46	SSW.	10.7	3,621	651.7	-9.6	0.68	92	2.47	NW.	22.0	3,547	3,500	
						3,750	640.2	-10.6		95	2.34	NW.	21.2	3,673	3,640	
10:45	975.4	4.1	58	SSW.	10.3	3,782	637.9	-10.9	0.81	96	2.29	NW.	21.0	3,705	3,670	
10:47	975.4	4.2	58	SSW.	10.3	3,884	629.5	-10.2	-0.60	78	1.99	NW.	21.0	3,804	3,770	
						4,000	620.9	-10.7		71	1.73	NW.	21.1	3,918	3,900	
11:00	975.0	4.8	50	SSW.	12.1	4,057	616.9	-10.9	0.90	68	1.63	NW.	21.2	3,973	4,000	
11:12	974.7	5.3	60	SSW.	11.2	4,007	622.1	-10.2	-1.05	72	1.84	NW.	24.2	3,925	3,910	
						4,000	622.4	-10.3		73	1.85	NW.	24.1	3,918	3,900	
11:18	974.5	5.5	60	SSW.	11.2	3,912	629.5	-11.2	0.66	89	2.07	NW.	23.2	3,832	3,810	
						3,750	642.6	-10.1		91	2.34	NW.	22.3	3,673	3,630	
11:28	974.2	5.8	60	SSW.	13.0	3,592	656.0	-9.1	0.88	92	2.58	NW.	21.4	3,519	3,400	
						3,500	663.2	-8.3		90	2.72	NW.	21.3	3,429	3,160	
						3,250	684.5	-6.1		84	3.07	NW.	20.8	3,184	2,480	
						3,000	706.5	-3.9		78	3.44	WNW.	20.4	2,939	2,020	
						2,750	729.2	-1.7		72	3.82	WNW.	20.0	2,694	1,810	
P. M.																
12:05	973.1	6.0	58	SSW.	12.5	2,730	731.2	-1.5	0.84	71	3.83	WNW.	20.0	2,675	1,800	
						2,500	752.1	0.4		66	4.15	WNW.	19.2	2,450	1,670	
						2,250	775.8	2.5		61	4.46	WNW.	18.3	2,205	1,530	
12:18	972.7	6.6	56	SSW.	13.0	2,027	797.6	4.4	0.83	56	4.69	WNW.	17.5	1,986	1,400	
						2,000	800.0	4.6		55	4.66	WNW.	17.6	1,960	1,380	
						1,750	824.8	6.7		48	4.71	WNW.	18.2	1,715	1,190	
12:26	972.4	6.4	61	SSW.	13.4	1,654	834.5	7.5	0.57	45	4.67	WNW.	18.5	1,621	1,110	
						1,500	850.1	8.4		45	4.96	WNW.	18.1	1,470	1,070	
12:37	972.1	7.1	58	SSW.	12.5	1,266	874.5	9.7	0.22	45	5.41	W.	17.5	1,241	1,010	
						1,250	875.8	9.7		45	5.41	W.	17.5	1,225	1,010	
12:45	971.8	7.2	58	SSW.	12.1	1,088	893.1	10.1	-3.62	48	5.93	SW.	17.0	1,065	590	
						1,000	902.0	7.1		50	5.04	SW.	16.6	980	380	
12:47	971.7	7.2	58	SSW.	12.1	879	915.7	2.3	1.04	53	3.96	SW.	16.0	862	70	
						750	929.7	4.1		54	4.42	SW.	15.7	735	0	
						500	959.0	6.7		55	5.40	SSW.	15.2	490	0	
12:59	971.3	7.8	56	SSW.	15.0	396	971.3	7.8		56	5.92	SSW.	15.0	388	1/10 Cl.St., nw.	

March 12, 1916.

A. M.														
9:06	964.1	9.1	64	SSW.	4.5	396	964.1	9.1	64	7.40	SSW.	4.5	388	8/10 Cl., nw.
						500	952.2	12.8	54	7.98	WSW.	7.4	490	Solar halo, increasing in brilliancy, throughout flight.
9:10	964.1	9.1	62	SSW.	4.5	668	933.4	18.9	38	8.30	WSW.	12.0	655	
						750	924.5	18.9	33	7.21	WSW.	12.0	735	
9:26	964.0	9.0	62	SSW.	4.5	916	906.6	18.9	23	6.02	W.	11.9	898	
						1,000	897.8	18.6	23	4.93	W.	11.6	980	
9:36	963.9	9.5	64	SSW.	3.6	1,181	879.0	17.9	22	4.51	W.	10.9	1,158	
						1,250	871.9	17.5	22	4.40	W.	10.9	1,225	
						1,500	846.2	15.9	21	3.79	W.	11.0	1,470	
10:35	963.6	12.0	53	sw.	4.5	1,653	831.5	14.9	21	3.56	W.	11.0	1,620	6/10 Cl., nw; 4/10 Cl.St., nw.
						1,750	821.7	14.0	21	3.36	W.	9.0	1,715	
11:45	963.2	15.0	43	WSW.	4.0	1,797	817.0	13.6	21	3.27	W.	8.0	1,761	5/10 Cl., nw; 5/10 Cl.St., nw.
						1,750	821.7	14.0	21	3.36	W.	7.6	1,715	
P. M.														
12:01	963.2	16.3	43	WSW.	3.1	1,634	832.7	14.9	21	3.56	W.	6.5	1,602	
						1,500	845.8	15.6	21	3.72	W.	6.8	1,470	
						1,250	870.9	17.0	21	4.07	WNW.	7.3	1,225	
12:21	962.8	17.2	41	W.	3.1	1,170	879.0	17.4	21	4.17	WNW.	7.5	1,147	
						1,000	896.4	18.0	21	4.33	WNW.	6.8	980	
12:27	962.6	17.7	41	W.	2.7	869	910.4	18.5	21	4.47	WNW.	6.3	852	
12:32	962.5	18.0	41	W.	2.7	798	918.0	15.1	21	3.60	WNW.	7.0	782	
						750	923.1	15.5	24	4.23	WNW.	6.5	735	
						500	950.6	17.3	37	7.31	W.	4.1	490	
12:40	962.3	18.1	42	W.	3.1	396	962.3	18.1	42	8.72	W.	3.1	388	3/10 Cl., nw; 7/10 Cl.St., nw.



## 45

March 13, 1916 (No. 1).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10° ergs.	volts.	
9:07	958.1	4.0	78	s.	5.4	396	958.1	4.0	-----	78	0.34	s.	5.4	388	-----	
						500	946.0	2.7	-----	78	5.79	sw.	8.9	490	0	
9:09	958.1	4.2	77	s.	5.4	522	943.4	2.4	1.27	78	5.66	sw.	9.7	512	0	
						750	917.2	11.0	-----	53	6.96	sw.	17.4	735	0	
9:15	958.1	4.3	78	s.	6.7	773	915.0	11.9	-3.78	50	6.96	sw.	18.2	758	0	
						1,000	890.1	14.1	-----	37	5.95	sw.	17.3	980	340	
9:19	958.1	4.6	76	s.	6.3	1,032	887.3	14.4	-0.97	35	5.74	sw.	17.2	1,012	370	
						1,250	864.1	13.2	-----	34	5.16	sw.	18.1	1,225	690	
						1,500	839.0	11.8	-----	34	4.71	wnw.	19.1	1,470	920	
9:32	958.1	5.4	77	s.	5.4	1,584	831.0	11.3	0.56	33	4.42	wnw.	19.5	1,653	1,000	
						1,750	814.7	10.4	-----	33	4.16	wnw.	18.0	1,715	1,080	
9:45	958.1	5.9	73	s.	6.7	2,000	790.4	9.1	0.53	32	3.70	w.	15.8	1,900	1,200	
						2,250	767.3	7.3	-----	33	3.33	w.	16.6	2,205	1,270	
						2,500	743.9	5.5	-----	33	2.98	w.	17.4	2,450	1,410	
						2,608	734.1	4.7	0.72	34	2.90	w.	17.8	2,555	1,450	
10:03	958.1	6.6	73	ssw.	6.7	2,750	721.3	4.0	-----	30	2.44	w.	18.4	2,694	1,570	
						3,000	699.2	2.8	-----	24	1.79	wnw.	19.4	2,939	1,780	
10:41	958.1	7.9	68	sw.	5.8	3,230	679.8	1.7	0.48	18	1.24	wnw.	20.4	3,164	1,970	
						3,250	677.8	1.5	-----	18	1.23	wnw.	20.5	3,184	1,970	
						3,500	657.0	-0.5	-----	19	1.11	wnw.	21.9	3,429	2,080	
11:16	957.8	9.7	64	sw.	5.4	3,669	643.1	-1.9	0.74	20	1.04	wnw.	22.9	3,594	-----	
						3,500	657.0	-0.8	-----	20	1.14	wnw.	22.9	3,429	-----	
						3,250	677.2	0.8	-----	20	1.29	wnw.	23.0	3,184	1,600	
						3,000	698.3	0.8	-----	21	1.52	w.	23.0	2,939	1,400	
11:40	957.4	10.9	62	sw.	6.3	2,747	720.4	2.1	0.65	21	1.72	w.	23.1	2,691	1,200	
						2,500	742.3	5.7	-----	22	2.02	w.	20.5	2,450	1,120	
11:51	957.2	11.1	62	sw.	6.7	2,271	763.3	7.2	0.06	22	2.24	w.	18.0	2,226	1,050	
						2,250	765.1	7.3	-----	22	2.25	w.	17.9	2,205	1,050	
						2,000	788.4	9.0	-----	23	2.64	w.	16.8	1,960	870	
						1,750	812.8	10.6	-----	24	3.07	w.	15.8	1,715	750	
P. M.																
12:02	957.0	11.7	60	w.	6.3	1,677	820.1	11.1	0.48	25	3.30	w.	15.5	1,644	670	
						1,500	837.0	11.9	-----	25	3.48	w.	17.9	1,470	590	
12:08	956.9	12.0	59	ws.	6.7	1,385	847.9	12.5	-2.71	25	3.62	w.	19.3	1,358	550	
						1,250	861.7	8.8	-----	28	3.17	w.	14.1	1,225	520	
12:10	956.9	12.0	60	ws.	6.7	1,149	872.3	6.1	0.48	31	2.92	w.	10.0	1,126	490	
						1,000	888.3	6.8	-----	44	4.35	w.	10.4	980	400	
12:23	956.8	12.4	59	w.	6.7	755	916.3	8.0	1.28	65	6.97	w.	11.0	740	160	
						500	944.5	11.3	-----	61	8.17	w.	7.7	490	0	
12:30	956.7	12.6	59	w.	6.3	396	956.7	12.6	-----	59	8.61	w.	6.3	388	-----	

March 13, 1916 (No. 2).

[illegible]



TABLE 4.—Free-air data from kite flights at Drezel Aerological Station, March, 1916—Continued.

March 13, 1916 (No. 3).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.	
P. M.	mb.	°C.	%	n.	m. p. s.	m.	mb.	°C.		%	mb.	n.	m. p. s.	10 <sup>6</sup> ergs.	volts.	
5:20	959.7	6.8	73	n.	9.8	396	959.7	6.8		73	7.21	n.	9.8	388		1/10 Cl., wnw.
						500	947.3	5.7		79	7.24	n.	11.3	490	0	
						750	918.6	3.2		93	7.15	n.	15.0	735	0	
5:25	959.8	6.6	74	n.	8.0	820	911.0	2.5	1.01	97	7.09	n.	16.0	804	0	
5:31	960.0	6.4	73	n.	9.4	968	894.7	1.1	0.95	99	6.55	n.	23.0	949	0	
						1,000	890.9	2.3		92	6.63	n.	23.0	980	0	
5:32	960.0	6.3	73	n.	8.5	1,129	877.1	7.1	-3.73	62	6.26	n.	23.0	1,107	0	3/10 St.Cu., n.
						1,250	864.3	6.7		59	5.79	n.	21.5	1,225	0	Altitude of St.Cu. base about
						1,500	838.7	5.8		53	4.89	nnw.	18.3	1,470	0	1,200 m.
5:56	960.5	6.0	75	n.	6.3	1,541	834.4	5.7	0.34	52	4.76	nnw.	17.8	1,510	0	
6:12	960.9	5.7	76	n.	6.3	1,652	823.5	7.6	-1.71	37	3.86	nw.	11.9	1,619	140	9/10 St.Cu., n.
						1,750	813.8	7.0		37	3.71	nw.	11.0	1,715	410	
						2,000	789.7	5.4		38	3.41	nw.	8.6	1,960	720	
6:50	961.8	5.1	75	n.	8.5	2,007	789.0	5.4	0.62	38	3.41	nw.	8.5	1,967	730	
						2,250	765.8	3.7		43	3.42	nw.	12.2	2,205	970	
						2,500	742.5	2.0		48	3.39	nw.	16.0	2,450	1,200	
						2,750	720.0	0.3		54	3.37	nw.	19.8	2,694		
						3,000	697.8	-1.4		59	3.21	nw.	23.6	2,939		
						3,250	676.2	-3.1		64	3.01	nw.	27.4	3,184		
7:03	962.1	5.0	76	n.	10.3	3,300	671.8	-3.4	0.62	65	2.99	nw.	28.2	3,233		
						3,250	676.2	-3.1		65	3.06	nw.	27.6	3,184		
						3,000	697.8	-1.7		66	3.50	nw.	24.6	2,939		
						2,750	720.0	-0.3		68	4.05	nw.	21.7	2,694		
						2,500	742.5	1.1		69	4.57	nw.	18.7	2,450		
7:28	962.3	4.7	76	n.	7.2	2,419	750.1	1.6	0.53	69	4.73	nw.	17.7	2,370		10/10 St.Cu., n.
						2,250	765.8	2.5		66	4.82	nw.	16.1	2,205		
						2,000	789.7	3.8		61	4.89	nnw.	13.8	1,960		
7:36	962.3	4.6	76	nne.	6.7	1,777	811.5	5.0	-0.85	57	4.97	nnw.	11.7	1,742	470	
						1,750	814.2	4.8		50	4.30	n.	14.9	1,715	450	
7:49	962.4	4.6	77	nne.	6.7	1,730	816.3	4.6	0.15	44	3.73	n.	17.2	1,696	420	
						1,500	839.6	5.0		43	3.75	n.	19.0	1,470	240	
						1,250	865.5	5.3		41	3.65	n.	21.0	1,225	180	
8:09	962.6	4.3	78	nne.	6.7	1,213	869.7	5.4	-6.92	41	3.68	n.	21.3	1,189	170	
8:10	962.6	4.3	77	nne.	6.7	1,109	880.9	-1.8	0.66	74	3.89	nne.	21.3	1,087	130	
						1,000	892.6	-1.1		79	4.40	nne.	18.4	980	90	
8:15	962.7	4.2	77	nne.	6.3	853	909.7	-0.1	0.90	86	5.21	nne.	14.5	836	50	
						750	920.9	0.8		84	5.43	nne.	12.5	735	0	
						500	950.0	3.1		81	6.18	nne.	7.8	490	0	
8:25	962.8	4.0	79	nne.	5.8	396	962.8	4.0		79	6.42	nne.	5.8	388		10/10 St.Cu., n.

March 14, 1916.

A. M.	Pressure.	Temperature.	Relative humidity.	Wind.	Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.	Wind.	Potential.	Remarks.
	mb.	°C.	%	Dir.	m.	mb.	°C.		Rel.	Dir.	Grav. ity.	
8:46	971.7	0.5	78	nne.	5.8	396	971.7	0.5	78	4.94	388	6/10 Cl.St., wsw.; 4/10 St.Cu., n.
						500	959.0	-0.6	81	4.71	490	
						750	929.6	-3.1	88	4.14	735	
8:53	971.9	0.8	77	nne.	8.9	798	924.0	-3.6	89	4.02	782	
						1,000	900.6	-4.9	90	3.64	980	
9:05	972.1	0.8	75	nne.	8.0	1,218	876.4	-6.4	92	3.28	1,194	
						1,250	872.9	-5.9	86	3.19	1,225	
9:11	972.2	0.9	74	nne.	7.6	1,485	847.3	-1.9	42	2.19	1,456	
						1,500	845.8	-2.0	42	2.17	1,470	
						1,750	819.6	-3.7	38	1.70	1,715	
9:32	972.5	1.2	70	nne.	6.7	1,981	795.9	-5.3	34	1.33	1,942	
						2,000	793.9	-5.4	34	1.32	1,960	
						2,250	769.1	-6.8	35	1.20	2,205	
10:09	973.0	1.3	71	nne.	5.8	2,500	744.9	-8.2	36	1.09	2,450	
						2,553	739.8	-8.5	37	1.10	2,502	
						2,500	744.9	-8.3	38	1.15	2,450	
						2,250	769.1	-7.2	41	1.36	2,205	
11:03	973.6	2.1	61	nne.	7.2	2,075	786.4	-6.4	43	1.53	2,033	
						2,000	793.9	-5.9	45	1.67	1,960	
11:24	973.8	2.0	62	nne.	5.4	1,787	816.0	-4.6	49	2.03	1,751	
						1,750	819.6	-6.7	50	1.74	1,715	
11:26	973.8	1.9	63	nne.	4.9	1,707	824.4	-9.2	52	1.45	1,673	
						1,500	846.4	-7.9	68	2.12	1,470	
						1,250	874.2	-6.3	87	3.12	1,225	
11:40	973.9	2.1	66	n.	6.3	1,222	877.7	-6.1	89	2.25	1,198	
						1,000	901.7	-4.4	87	3.67	980	
P. M.												
12:03	974.0	2.0	64	n.	7.6	752	931.6	-2.5	85	4.22	737	
						500	961.7	1.0	71	4.66	490	
12:09	974.2	2.4	65	n.	5.4	396	974.2	2.4	65	4.72	388	10/10 St.Cu., n.

## OBSERVATIONS AT DREXEL, MARCH, 1916.

47

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 15, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%	n.	m. p. s.	m.	mb.	° C.		%	mb.	m. p. s.	10 <sup>6</sup> ergs.	volts.		
8:29	985.9	-4.3	72	n.	4.0	396	985.9	-4.3		72	3.07	n.	4.0	388	4/10 A.Cu., n; 1/10 St.Cu., n.	
8:41	986.0	-3.8	68	n.	4.0	500	972.9	-5.5		76	2.92	n.	5.5	490	Snow flurries until 11:05 a.m.	
						720	946.0	-8.0	1.14	85	2.64	n.	8.6	706		600
						750	942.3	-8.3		86	2.60	n.	9.0	735		650
8:58	986.1	-3.9	70	n.	5.4	1,000	912.3	-10.6		92	2.26	n.	12.0	980	1,100	
						1,132	896.9	-11.8	0.92	95	2.10	n.	13.6	1,110	1,510	
9:10	986.1	-3.3	70	n.	6.3	1,250	883.2	-12.6		97	1.99	n.	14.5	1,225	1,700	
						1,462	859.1	-14.1	0.70	100	1.79	n.	16.0	1,433	2,010	
9:25	986.1	-3.0	71	n.	5.4	1,500	854.8	-12.5		85	1.76	n.	15.4	1,470	2,040	
						1,582	845.8	-9.1	-4.17	53	1.49	nnw.	14.1	1,551	2,090	
						1,750	827.8	-10.2		47	1.20	nnw.	14.6	1,715	2,200	
9:45	986.1	-2.7	63	n.	4.0	2,000	800.7	-12.0		39	0.85	nnw.	15.4	1,960	2,360	
						2,196	780.8	-13.3	0.68	32	0.62	nnw.	16.0	2,152	2,690	
						2,250	775.0	-13.7		31	0.58	nnw.	16.3	2,205	2,800	
10:12	986.0	-2.5	65	n.	4.5	2,500	750.0	-15.3		25	0.40	nnw.	17.7	2,450	3,350	
						2,661	734.4	-16.4	0.67	22	0.32	nnw.	18.6	2,607	3,620	
						2,750	725.9	-16.1		19	0.28	nnw.	18.5	2,694	3,630	
11:05	985.8	-1.9	67	n.	3.1	3,000	702.3	-15.3		10	0.16	nnw.	18.4	2,939		
						3,067	696.4	-15.1	0.00	8	0.13	nnw.	18.3	3,005		
						3,000	702.3	-14.9		9	0.15	nnw.	18.3	2,939		
11:25	985.6	-1.4	60	nnw.	4.0	2,750	725.9	-14.1		9	0.16	nnw.	18.3	2,694		
						2,573	743.6	-13.5	0.52	10	0.19	nnw.	18.3	2,521		
						2,500	750.0	-13.1		11	0.22	nnw.	18.0	2,470		
11:40	985.5	-1.6	63	nnw.	3.6	2,250	775.0	-11.8		12	0.27	nnw.	16.8	2,205		
						2,000	800.7	-10.5		14	0.35	n.	15.7	1,980		
						1,751	827.8	-9.2	-1.86	16	0.45	n.	14.6	1,716	1,250	
11:41	985.5	-1.6	63	nnw.	2.6	1,574	847.0	-12.5	0.74	27	0.56	n.	13.1	1,543	1,040	
						1,500	854.8	-11.9		31	0.68	n.	12.4	1,470	950	
						1,250	883.2	-10.0		43	1.12	n.	10.0	1,225	650	
11:49	985.5	-1.1	57	n.	3.6	1,000	912.3	-8.1		55	1.69	n.	7.5	980	340	
						847	930.8	-6.9	1.57	62	2.11	n.	6.0	830	160	
						750	942.3	-5.4		61	2.37	nnw.	5.4	735	30	
11:55	985.4	0.2	60	nnw.	3.1	500	972.9	-1.4		61	3.32	nnw.	3.8	490	0	
						396	985.4	0.2		60	3.72	nnw.	3.1	388		
															7/10 St.Cu., n.	

March 16, 1916.

A. M.																
8:20	972.8	-0.2	67	s.	5.8	396	972.8	-0.2	67	4.03	s.	5.8	388			3/10 Cl. St., wnw.
						500	960.0	-1.0	69	3.88	s.	9.1	490			
						750	930.4	-2.8	73	3.53	sw.	17.0	735			
8:25	972.9	-0.3	68	s.	5.8	760	929.4	-2.9	73	3.50	sw.	17.3	745			
						1,000	902.1	0.7	65	4.18	w.	15.0	980			
8:40	973.1	0.8	67	s.	6.7	1,129	888.0	2.7	61	4.53	wnw.	13.8	1,107			2/10 Cl., wnw.; 1/10 Cl.St., wnw.
						1,250	875.0	4.7	51	4.36	wnw.	16.1	1,225			
9:17	973.1	2.8	56	s.	9.8	1,455	853.8	8.0	34	3.65	nw.	20.0	1,426			
						1,500	849.0	7.7	34	3.57	nw.	19.8	1,470			
						1,750	823.5	6.3	34	3.25	nw.	21.0	1,715			
9:21	973.1	2.8	56	s.	8.5	2,000	798.8	4.9	33	2.86	nw.	22.3	1,960			
						2,110	788.0	4.3	33	2.74	nw.	22.8	2,068			3/10 Cl., wnw.; 3/10 Cl. St. wnw.
						2,250	774.7	3.3	34	2.63	nw.	25.1	2,205			
						2,500	751.0	1.4	35	2.37	nw.	29.3	2,450			
9:46	972.8	3.3	53	s.	6.3	2,750	728.1	-0.2	36	2.16	nw.	33.5	2,694			
						2,841	719.8	-0.8	36	2.06	nw.	35.0	2,784			
						2,750	728.1	-0.1	35	2.12	nw.	33.5	2,694			
						2,500	751.0	1.8	34	2.37	nw.	29.3	2,450			
10:16	972.6	4.4	45	s.	5.4	2,250	774.7	3.7	33	2.63	nw.	25.1	2,205			
						2,151	781.2	4.2	33	2.72	nw.	24.0	2,137			8/10 Cl., wnw.; 2/10 Cl.St., wnw.
						2,000	796.8	5.2	33	2.92	nw.	22.4	1,960			
						1,750	823.5	6.5	33	3.19	nw.	20.2	1,715			
10:28	972.6	4.7	46	s.	5.4	1,619	836.8	7.2	33	3.35	nw.	19.0	1,587			
						1,500	849.0	7.9	32	3.41	nw.	15.5	1,470			
10:35	973.6	5.0	49	s.	6.3	1,388	861.0	8.5	32	3.55	nw.	12.3	1,361			
						1,250	875.0	6.5	34	3.29	nw.	11.7	1,225			
						1,000	902.6	2.8	37	2.76	wnw.	10.6	980			
10:40	972.6	4.8	52	s.	6.3	831	921.8	0.3	39	2.43	wnw.	9.9	815			
						750	931.1	1.3	42	2.82	w.	9.1	735			
						500	960.0	4.4	50	4.18	sw.	6.5	490			4/10 Cl., wnw.; 2/10 Cl.St., wnw.
10:49	972.6	5.7	53	s.	5.4	396	972.6	5.7	53	4.85	s.	5.4	388			

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 17, 1916, series (No. 1).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Altitude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>8</sup> ergs.	volts.	
8:10.....	970.9	-0.1	74	ese.	8.9	396	970.9	-0.1	.....	74	4.48	ese.	8.9	388	.....	3/10 Cl.St., wnw.; light haze.
8:12.....	970.8	0.2	71	ese.	8.9	500	958.1	-0.9	.....	74	4.20	se.	13.2	490	200	
8:18.....	970.8	0.5	72	ese.	8.5	633	942.4	-1.9	0.76	75	3.92	sse.	18.8	621	450	
8:42.....	970.7	0.9	71	ese.	8.9	750	928.8	4.4	.....	64	5.36	sse.	18.8	735	690	
8:50.....	970.7	1.3	69	ese.	8.5	778	925.7	5.9	-5.38	61	5.67	sse.	18.8	763	755	
8:54.....	970.6	1.5	69	ese.	7.2	1,000	900.4	7.1	.....	50	5.04	s.	15.9	980	1,000	
8:59.....	970.6	1.6	67	ese.	7.2	1,250	873.9	8.4	.....	38	4.19	s.	12.7	1,225	1,360	
9:19.....	970.7	2.2	66	ese.	5.8	1,456	852.6	9.5	-0.53	28	3.32	ssw.	10.0	1,427	1,750	3/10 Cl.St., wnw.
10:02.....	970.9	3.8	65	se.	7.6	1,500	847.9	9.3	.....	28	3.28	ssw.	10.5	1,470	1,810	
10:42.....	970.7	5.2	57	se.	8.0	1,754	822.4	8.0	0.50	28	3.00	sw.	13.5	1,719	2,100	
11:05.....	970.5	6.4	58	se.	7.2	2,000	798.1	8.9	.....	27	3.08	wsnw.	15.4	1,960	2,380	
11:19.....	970.3	6.9	58	se.	8.5	2,056	792.8	9.1	-0.36	26	3.01	w.	15.8	2,015	2,440	
11:38.....	969.9	7.5	55	se.	9.8	2,250	774.2	8.3	.....	23	2.52	w.	17.2	2,205	2,670	
11:40.....	969.9	7.6	54	se.	9.4	2,369	763.4	7.8	0.42	21	2.22	w.	18.1	2,321	2,800	
11:58.....	969.6	8.4	52	se.	7.6	2,500	751.0	6.6	.....	21	2.05	w.	18.0	2,450	2,950	
12:06.....	969.5	8.3	53	se.	9.8	2,750	728.7	4.4	.....	22	1.84	w.	17.9	2,694	3,230	
12:15.....	969.4	8.8	52	se.	7.6	2,902	715.2	3.0	0.90	22	1.67	w.	17.8	2,843	3,400	
						3,000	706.5	2.2	.....	22	1.58	w.	16.9	2,939	3,520	
						3,250	684.8	0.0	.....	23	1.41	w.	14.6	3,184	3,840	
						3,500	663.7	-2.2	.....	24	1.22	w.	12.2	3,429	4,230	
						3,621	653.8	-3.2	0.86	25	1.17	w.	11.1	3,547	4,400	6/10 Cl., wnw.; 4/10 Cl.St., wnw.
						3,750	643.2	-4.2	.....	26	1.12	w.	13.0	3,673	4,670	
						4,000	623.1	-6.0	.....	29	1.07	w.	16.7	3,918	.....	
						4,250	603.6	-7.9	.....	32	1.00	w.	20.4	4,162	.....	
						4,358	595.3	-8.7	0.76	33	0.96	w.	22.0	4,268	.....	5/10 Cl., wnw.; 5/10 Cl.St., wnw.
						4,250	603.6	-7.9	.....	33	1.03	w.	21.8	4,162	4,090	
						4,000	623.1	-6.0	.....	34	1.25	w.	21.4	3,918	3,710	
						3,750	643.2	-4.0	.....	35	1.53	w.	21.0	3,673	3,340	
						3,531	661.3	-2.3	0.91	35	1.76	w.	20.7	3,459	3,000	
						3,500	663.7	-2.0	.....	35	1.81	w.	20.8	3,429	2,960	
						3,250	684.8	0.3	.....	34	2.12	w.	20.9	3,184	2,730	
						3,080	699.5	1.8	0.78	33	2.30	w.	21.0	3,018	2,500	7/10 Cl., wnw.; 3/10 Cl.St., wnw.
						3,000	706.5	2.4	.....	32	2.32	w.	20.3	2,939	2,490	
						2,750	728.7	4.4	.....	30	2.51	w.	18.0	2,694	2,120	
						2,500	751.0	6.3	.....	29	2.77	w.	15.6	2,450	1,750	
						2,250	774.2	8.3	.....	27	2.96	w.	13.2	2,205	1,610	
						2,128	785.6	9.2	-0.89	26	3.03	w.	12.2	2,085	1,550	
						2,000	798.1	8.1	.....	25	2.70	wsnw.	9.9	1,960	1,480	
						1,882	809.4	7.0	0.28	25	2.50	wsnw.	7.7	1,845	1,410	
						1,750	822.8	7.4	.....	26	2.68	wsnw.	9.2	1,715	1,340	
						1,500	847.9	8.1	.....	27	2.92	sw.	12.0	1,470	1,240	
						1,250	873.9	8.8	.....	28	3.17	ssw.	14.8	1,225	1,110	
						1,140	885.5	9.1	-1.74	28	3.24	s.	16.0	1,118	1,040	8/10 Cl., wnw.; 1/10 Cl.St., wnw.
						1,000	900.4	6.7	.....	37	3.63	s.	15.3	980	760	
P. M.																
12:06.....	969.5	8.3	53	se.	9.8	830	919.4	3.7	1.18	49	3.90	sse.	14.5	814	330	
12:15.....	969.4	8.8	52	se.	7.6	750	928.2	4.6	.....	50	4.24	sse.	13.2	735	270	Light haze.
						500	956.8	7.6	.....	51	5.32	se.	9.3	490	90	
						396	969.4	8.8	.....	52	5.89	se.	7.6	388	.....	6/10 Cl., wnw.; 1/10 Cl.St., wnw.

March 17, 1916, series (No. 2).

P. M.	968.9	10.6	50	sse.	6.3	396	968.9	10.6		50	6.39	sse.	6.3	388	1/10 Cl., wnw.; 2/10 Cl.St., wnw.
1:05.....	968.9	10.6	50	sse.	6.3	500	956.5	9.2		51	5.94	sse.	7.9	490	0
1:10.....	968.8	10.6	49	sse.	8.0	731	930.3	6.0	1.37	53	4.96	se.	11.3	717	0
1:21.....	968.6	11.1	49	sse.	7.2	750	928.0	5.9		54	5.02	sse.	11.4	735	0
1:23.....	968.5	10.9	49	sse.	7.2	922	908.7	4.8	0.63	61	5.25	sse.	12.7	904	200
1:24.....	968.3	11.6	47	se.	6.7	1,000	900.0	6.3		61	5.83	sse.	13.7	980	290
2:22.....	967.6	12.2	46	se.	7.6	1,115	887.4	8.6	-1.97	60	6.70	s.	15.2	1,093	430
2:40.....	967.5	12.7	45	se.	6.3	1,250	872.9	8.3		55	6.02	s.	13.3	1,225	600
						1,396	857.6	8.0	0.21	50	5.35	ssw.	11.2	1,368	840
						1,500	846.5	8.7		47	5.29	ssw.	9.9	1,470	1,010
						1,750	821.2	10.4		39	4.92	sw.	6.8	1,715	1,200
						1,771	819.2	10.5	-0.67	38	4.83	sw.	6.5	1,736	1,210
						2,000	796.3	9.0		35	4.02	wsnw.	8.6	1,960	1,330
						2,250	772.6	7.4		32	3.30	wsnw.	10.8	2,205	1,450
						2,500	749.2	5.9		29	2.69	w.	13.1	2,450	1,580
						2,750	727.0	4.3		26	2.16	w.	15.3	2,694	1,710
						2,923	711.9	3.2	0.63	24	1.85	wsnw.	17.0	2,864	1,790
						3,000	705.1	2.6		24	1.77	wsnw.	17.3	2,939	1,840
						3,250	683.8	0.6		24	1.53	wsnw.	18.2	3,184	2,030
						3,500	662.8	-1.4		24	1.31	wsnw.	19.2	3,429	2,220
3:15.....	967.3	13.4	45	se.	5.4	3,750	642.1	-3.4	0.81	24	1.10	wsnw.	20.2	3,673	2,410
3:45.....	967.0	13.7	45	se.	4.0	3,937	627.0	-4.9		24	0.97	wsnw.	20.8	3,856	7/10 Cl., wnw.
						3,750	642.1	-3.4		24	1.10	wsnw.	20.3	3,673	
						3,500	662.4	-1.3		25	1.37	wsnw.	19.7	3,429	
						3,245	683.8	0.8	0.71	25	1.62	wsnw.	19.0	3,179	1,500
						3,000	704.2	2.5		25	1.83	wsnw.	17.0	2,939	1,340
						2,750	726.5	4.3		24	1.99	wsnw.	15.0	2,694	1,180
						2,500	749.2	6.1		24	2.26	wsnw.	13.0	2,450	1,010
4:00.....	966.9	14.0	45	se.	3.6	2,332	765.0	7.3	0.57	24	1.88	wsnw.	11.6	2,285	890
						2,250	772.6	7.8		24	2.54	wsnw.	11.3	2,205	850
						2,000	796.1	9.7		24	2.89	w.	10.4	1,960	730
4:11.....	966.8	14.1	45	se.	4.5	1,752	820.4	10.6	-1.26	24	3.07	w.	9.5	1,717	620
4:15.....	966.8	14.0	45	se.	5.4	1,500	845.6	7.4		27	2.78	wsnw.	7.5	1,470	500
4:32.....	966.7	13.8	46	se.	4.9	1,314	865.2	5.1	0.64	29	2.55	sw.	6.0	1,288	420
						1,250	871.8	5.5		36	3.25	ssw.	6.3	1,225	390
						1,050	893.6	6.8	0.93	58	5.73	sse.	7.2	1,029	300
						1,000	898.6	7.3		58	5.93	sse.	7.3	980	280
						750	926.3	9.5		57	6.77	se.	7.5	735	160
4:40.....	966.7	13.6	46	se.	4.0	729	929.0	9.8	1.11	57	6.91	se.	7.5	715	139
						500	954.4	12.3		49	7.01	se.	5.1	490	50
4:44.....	966.7	13.5	46	se.	4.0	396	966.7	13.5		46	7.11	se.	4.0	388	5/10 Cl., wnw.



## OBSERVATIONS AT DREXEL, MARCH, 1916.

49

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 17, 1916, series (No. 3).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	el.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
P. M.	mb.	° C.	%	se.	m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
5:11	966.5	13.2	48	se.	4.0	306	966.5	13.2		48	7.28	se.	4.0	388		5/10 Cl., wnw.
						500	954.2	12.1		49	6.92	se.	5.2	490	0	
5:22	966.4	13.0	49	se.	4.5	722	929.4	9.8	1.04	50	6.06	se.	7.9	708	0	
						750	926.1	9.5		51	6.05	se.	8.0	735	0	
						1,000	898.2	7.1		54	5.45	se.	8.1	980	0	
5:41	966.3	12.6	52	se.	4.5	1,031	895.1	6.8	0.97	55	5.43	se.	8.2	1,011	60	6/10 Cl., wnw.
7:40	966.1	7.5	66	se.	5.4	1,215	875.1	9.1	-1.25	54	6.24	sse.	7.0	1,191	410	Lunar halo of 22° from 7:15 to 8:50 p. m.
						1,250	871.7	9.6		51	6.09	sse.	6.6	1,225	480	
7:54	966.0	7.5	66	se.	5.8	1,428	853.1	12.4	-1.16	33	4.75	ssw.	4.4	1,400		
						1,250	871.7	11.0		36	4.73	ssw.	7.4	1,225	480	
8:25	966.0	7.1	68	se.	5.8	1,155	881.4	10.3	-0.36	35	4.76	ssw.	9.0	1,132	320	Corona from 8 to 8:50 p. m.
						1,000	898.0	9.7		41	4.93	s.	8.6	980	200	
8:36	966.0	6.9	69	se.	6.3	934	905.2	9.5	-0.07	42	4.99	s.	8.5	916	150	
						750	925.8	9.4		47	5.54	s.	10.0	735	0	
8:46	966.0	6.7	69	se.	5.4	531	950.3	9.2	-1.85	52	6.05	sse.	11.8	521	0	
						500	953.8	8.6		56	6.26	sse.	10.1	490	0	
8:48	966.0	6.7	69	se.	4.5	396	966.0	6.7		69	6.77	se.	4.5	388		6/10 Cl. & Cl.St., wnw.

March 17-18, 1916, series (No. 4).

P. M.														
9:23	965.9	6.6	69	sse.	5.8	396	965.9	6.6	69	6.73	sse.	5.8	388	6/10 Cl. & Cl.St., wnw.
						500	953.6	7.8	68	7.19	sse.	7.5	490	0
9:28	965.8	6.5	70	sse.	5.8	707	930.1	10.1	66	8.16	sse.	11.0	693	0
						750	925.1	10.1	65	8.16	sse.	10.3	735	50
9:41	965.9	6.2	71	se.	5.4	927	905.9	10.0	66	8.10	sse.	7.5	909	230
						1,000	897.1	11.4	57	7.68	s.	6.8	980	300
11:32	964.8	4.7	76	sse.	6.3	1,212	874.7	15.4	32	5.60	ssw.	4.8	1,188	8/10 Cl. & Cl.St., wnw; 4/10 Cl. nw.
						1,250	870.3	15.2	31	5.35	ssw.	4.7	1,225	
						1,500	845.1	13.9	30	4.76	ssw.	4.3	1,470	
11:38	964.7	4.5	76	se.	6.3	1,510	844.2	13.8	30	4.73	ssw.	4.3	1,480	
11:53	964.5	4.2	78	sse.	5.8	1,754	820.1	12.1	28	3.95	ssw.	7.4	1,719	2/10 Cl., nw.
						1,500	845.1	13.4	27	4.15	ssw.	7.2	1,470	
11:59	964.4	4.1	78	sse.	5.4	1,392	856.4	13.9	27	4.29	ssw.	7.1	1,365	
						1,250	870.8	15.0	27	4.60	ssw.	6.9	1,225	
A. M.														
12:05	964.4	4.0	79	sse.	4.9	1,093	887.1	16.3	26	4.82	ssw.	6.6	1,072	
						1,000	896.5	15.4	28	4.90	ssw.	8.1	980	380
12:18	964.2	3.4	81	sse.	5.4	784	919.9	13.2	32	4.85	ssw.	11.5	709	90
						750	923.3	12.3	36	5.15	ssw.	11.0	735	40
						500	952.0	6.0	68	6.36	s.	7.0	490	0
12:24	964.2	3.3	81	sse.	5.4	396	964.2	3.3	81	6.27	sse.	5.4	388	Cloudless.

March 18, 1916, series (No. 5).

A. M.																	
12:59	963.8	2.7	84	s.	3.6	396	963.8	2.7	84	6.23	s.	3.6	388	.....	Cloudless.		
						500	951.4	5.5	.....	76	6.86	s.	6.3	490	0		
1:06	963.8	2.8	84	s.	4.0	751	923.0	12.3	-2.70	58	8.30	ssw.	12.7	736	0		
						1,000	896.0	16.2	.....	29	5.34	ssw.	8.7	980	600		
1:23	963.8	2.8	84	s.	4.0	1,010	895.2	16.4	-1.58	28	5.22	ssw.	8.5	990	630		
						1,250	870.2	14.8	.....	28	4.71	sw.	8.3	1,225	1,030		
						1,500	845.0	13.1	.....	28	4.22	wsww.	8.1	1,470	1,150		
2:13	964.0	2.1	85	n.	2.2	1,586	836.2	12.5	0.68	28	4.08	wsww.	8.0	1,554	1,090	1/10 Cl., nw.	
						1,750	820.2	11.0	.....	28	3.68	wsww.	8.2	1,715	1,270		
						2,000	796.1	8.8	.....	28	3.17	w.	8.4	1,980	1,400		
2:40	964.8	1.7	88	nne.	4.5	2,044	791.9	8.5	0.87	28	3.11	w.	8.5	2,003	1,430		
						2,250	772.7	6.6	.....	30	2.92	w.	11.9	2,205	1,530		
						2,500	749.3	4.3	.....	33	2.74	w.	16.1	2,450	1,650		
2:55	965.2	1.5	88	nne.	4.9	2,717	729.9	2.3	0.92	36	2.60	w.	19.7	2,662	1,790		
						2,750	726.8	2.1	.....	36	2.56	w.	19.8	2,694	1,810		
						3,000	704.5	0.4	.....	40	2.52	w.	20.3	2,939	2,030		
						3,250	682.5	-1.4	.....	43	2.34	w.	20.8	3,184	2,260		
3:31	965.9	1.2	87	nne.	4.0	3,440	666.1	-2.7	0.70	45	2.20	w.	21.2	3,370	.....	4/10 Cl., nw.	
						3,250	682.0	-1.3	.....	46	2.52	w.	20.5	3,184	.....		
						3,000	703.2	0.4	.....	48	3.02	w.	19.6	2,939	2,190		
						2,750	725.2	2.2	.....	49	3.51	w.	18.7	2,694	1,770		
4:03	966.4	1.1	89	nne.	3.6	2,570	741.6	3.5	0.72	50	3.92	w.	18.0	2,518	1,450	2/10 Cl., nw.	
						2,500	747.8	4.0	.....	49	3.98	w.	17.4	2,450	1,400		
						2,250	771.1	5.8	.....	48	4.43	wnw.	15.4	2,205	1,320		
						2,000	795.2	7.6	.....	47	4.91	nw.	13.3	1,960	1,210		
4:13	966.4	1.1	89	nne.	4.0	1,934	801.5	8.1	-0.12	46	4.97	nw.	12.7	1,896	1,170		
						1,750	819.9	7.9	.....	47	5.01	nne.	13.3	1,715	1,110		
						1,500	845.0	2.6	.....	48	5.01	n.	14.2	1,470	1,020		
4:30	966.4	1.2	89	nne.	4.9	1,246	871.5	7.3	0.51	49	5.01	nne.	15.0	1,221	980		
						1,000	897.2	8.6	.....	53	5.92	nne.	15.0	990	700		
4:38	966.5	1.1	89	nne.	3.6	817	917.9	9.5	-2.02	56	6.65	nne.	15.0	801	500		
						750	924.9	8.1	.....	61	6.59	nne.	13.0	735	420		
						500	953.9	3.1	.....	81	6.18	nne.	5.7	490	130		
4:46	966.5	1.0	89	nne.	2.7	396	966.5	1.0	.....	89	5.85	nne.	2.7	388	.....	Few Cl.St., nw.	

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 15, 1916, series (No. 6).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%	ne.	m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
5:30	966.8	0.8	87	ne.	3.6	396	966.8	0.8		87	5.63	ne.	3.6	388	1/10 Cl.St., w.	
5:32	966.9	0.8	88	ne.	3.6	500	954.5	4.9		87	7.53	ne.	12.3	490	230	
						628	939.8	9.9	-3.92	87	10.61	nne.	23.1	616	510	
						750	925.9	9.1		78	9.02	nne.	22.8	735	780	
						1,000	898.2	7.3		60	6.14	nne.	22.3	980	1,200	
5:46	967.0	0.5	90	ne.	4.0	1,136	883.8	6.4	0.69	50	4.80	nne.	22.0	1,114	1,430	
5:51	967.1	0.5	90	ne.	3.6	1,219	875.1	7.3	-1.08	45	4.60	nne.	20.0	1,195	1,540	
						1,250	871.7	7.1		45	4.54	nne.	19.5	1,225	1,570	
						1,500	845.6	5.6		42	3.82	nne.	15.8	1,470	1,800	
						1,750	820.2	4.1		40	3.28	nne.	12.2	1,715	2,100	
6:15	967.4	0.0	92	n.	3.6	1,773	818.0	4.0	0.60	40	3.25	nne.	11.8	1,738	2,100	
						2,000	795.7	2.2		46	3.29	n.	10.7	1,960	2,100	
7:20	968.3	1.1	90	n.	3.1	2,226	774.0	0.4	0.79	51	3.21	nnw.	9.6	2,181	2,500	
						2,250	771.6	0.5		51	3.23	nnw.	9.7	2,205	2,510	
						2,500	748.0	2.0		51	3.60	nnw.	11.3	2,450	2,680	
						2,750	725.3	3.4		51	3.98	nw.	12.8	2,694	2,710	
7:32	968.6	1.4	90	n.	3.1	2,780	722.9	3.6	-0.58	51	4.03	nw.	13.0	2,724	2,880	
						3,000	703.0	2.0		45	3.39	nw.	15.2	2,989	3,010	
						3,250	681.3	0.0		44	2.69	nw.	17.9	3,184	3,180	
						3,500	660.2	-2.0		40	2.07	nw.	20.7	3,429	3,300	
						3,750	640.0	-3.9		36	1.59	nw.	23.4	3,673		
7:53	969.1	2.4	87	n.	3.6	3,962	623.2	-4.8	0.62	34	1.39	nw.	24.6	3,881		
						3,750	640.0	-3.6		36	1.63	nw.	26.1	3,673		
						3,500	660.4	-2.2		38	1.93	nnw.	27.8	3,429		
						3,250	681.9	-0.9		39	2.21	nnw.	29.5	3,184		
8:28	969.9	4.2	80	n.	4.0	3,152	690.2	-0.4	-0.37	40	2.36	nnw.	30.2	3,088		
						3,000	703.8	-1.0		46	2.59	nnw.	27.6	2,939		
8:40	970.2	4.9	78	n.	4.9	2,964	707.1	-1.1	0.73	48	2.67	nnw.	27.0	2,904	2,800	
						2,750	726.3	0.5		49	3.10	nnw.	21.9	2,694	2,570	
8:48	970.3	5.3	77	n.	7.2	2,635	736.7	1.3	-0.42	49	3.29	nnw.	19.2	2,582	2,450	
						2,500	749.0	0.7		50	3.22	nnw.	13.8	2,450	2,320	
8:50	970.4	5.4	77	n.	7.2	2,446	754.2	0.5	0.84	50	3.16	nnw.	11.7	2,397	2,260	
						2,250	772.5	2.1		50	3.58	nnw.	12.9	2,205	2,060	
						2,000	796.8	4.2		49	4.04	nnw.	14.4	1,960	1,760	
						1,750	822.1	6.3		49	4.68	nnw.	16.0	1,715	1,410	
9:04	970.7	6.0	74	n.	6.7	1,732	824.0	6.5	-6.94	40	4.74	nnw.	16.1	1,698	1,390	
9:06	970.7	6.0	73	nne.	6.7	1,683	828.9	3.1	-0.03	48	3.66	n.	14.6	1,650	1,320	
						1,500	847.7	3.0		53	4.02	nne.	14.9	1,470	1,080	
9:18	970.8	6.3	72	nne.	6.7	1,380	860.4	3.0	0.87	56	4.24	nne.	15.0	1,353	980	
						1,250	874.1	4.1		56	4.59	nne.	13.2	1,225	870	
9:22	970.9	6.5	71	nne.	9.8	1,093	891.4	5.5	0.09	56	5.06	nne.	11.0	1,072	730	
						1,000	901.3	5.6		59	5.37	nne.	14.2	980	570	
9:34	971.0	6.9	69	nne.	7.6	878	915.3	5.7	-2.08	62	5.68	nne.	18.3	861	360	
9:41	971.1	7.1	68	nne.	7.2	777	926.8	3.6	0.92	72	5.70	nne.	17.2	762	170	
						750	929.5	3.8		72	5.77	nne.	16.5	735	160	
						500	958.6	6.1		68	6.41	nne.	9.6	490	50	
9:46	971.2	7.1	67	nne.	6.7	396	971.2	7.1		67	6.76	nne.	6.7	388	5/10 Cl.St., w.	

March 15, 1916, series (No. 7).

A. M.																
10:21	971.7	8.1	64	nne.	8.5	396	971.7	8.1		64	6.91	nne.	8.5	388		4/10 Cl., w.
						500	959.3	6.5		67	6.49	nne.	10.1	490	0	
						750	930.6	3.6		74	5.85	n.	13.0	735	0	
10:25	971.8	8.2	65	n.	8.5	787	926.4	3.1	1.28	75	5.72	n.	13.5	772	0	
10:30	971.9	7.9	64	n.	8.0	806	917.6	4.8	-2.15	77	6.62	n.	15.7	849	170	
						1,000	902.5	4.6		72	6.11	n.	15.8	980	250	
						1,250	875.0	4.2		63	5.20	n.	16.0	1,225	420	
10:47	972.2	8.0	63	n.	6.7	1,288	871.6	4.1	0.17	62	5.08	n.	16.0	1,263	450	
						1,500	848.9	3.1		51	3.89	n.	15.6	1,470	640	
						1,750	823.3	1.8		38	2.64	nne.	15.1	1,715	910	
11:05	972.4	8.1	62	nne.	7.2	1,798	818.4	1.6	0.49	35	2.40	nne.	15.0	1,762	980	6/10 Cl., w.
						2,000	798.5	2.6		27	1.99	n.	15.3	1,960	1,080	Solar halo 11:25 to 11:50 a. m.
11:28	972.7	8.1	56	n.	5.4	2,195	779.5	3.6	-0.50	18	1.42	nnw.	15.5	2,151	1,170	
						2,250	774.2	3.1		20	1.53	nnw.	16.0	2,205	1,250	
						2,500	750.7	0.8		27	1.75	nw.	18.1	2,450	1,320	
11:36	972.8	8.3	54	nne.	7.2	2,666	735.3	-0.8	0.93	32	1.83	nw.	19.5	2,612	1,400	
						2,750	727.8	-1.2		34	1.88	nw.	20.7	2,694	1,460	
						3,000	705.1	-2.3		38	1.92	nw.	24.1	2,939	1,660	
						3,250	683.6	-3.5		43	1.96	nw.	27.6	3,184	1,850	
						3,500	662.2	-4.6		47	1.95	nw.	31.0	3,429	2,030	3/10 Cl., w.
P. M.																
12:11	973.1	8.8	52	nne.	7.6	3,743	642.0	-5.7	0.50	52	1.97	nw.	34.4	3,666	2,200	
						3,500	662.2	-4.3		52	2.22	nw.	30.4	3,429		
						3,250	683.6	-2.9		52	2.50	nw.	26.3	3,184		
12:38	973.2	8.8	49	nne.	7.2	3,105	696.0	-2.1	-0.26	52	2.67	nw.	23.9	3,042		
						3,000	705.1	-2.4		55	2.75	nw.	24.5	2,939		
12:48	973.2	8.8	50	nne.	8.0	2,953	709.4	-2.5	0.64	57	2.83	nw.	24.8	2,893	1,000	2/10 Cl., w.
						2,750	727.8	-1.2		50	2.76	nw.	20.8	2,694	840	
						2,500	750.7	0.4		42	2.64	nnw.	15.8	2,450	640	
						2,250	774.2	2.0		34	2.40	nnw.	10.9	2,205	450	
12:55	973.3	9.3	49	nne.	7.6	2,172	782.0	2.5	-0.27	31	2.27	nnw.	9.4	2,129	390	
						2,000	798.5	2.0		27	1.91	n.	7.6	1,960	250	
						1,750	824.0	1.4		22	1.49	n.	13.9	1,715	50	
1:12	973.4	9.5	51	nne.	7.2	1,639	830.4	1.2	0.42	21	1.40	nne.	14.5	1,655	0	
						1,500	850.0	2.0		21	1.48	nne.	13.3	1,470	0	
						1,250	876.6	3.0		22	1.67	nne.	11.8	1,225	0	
1:22	973.4	10.0	50	nne.	6.7	1,162	886.2	3.4	0.33	22	1.72	nne.	11.2	1,139	0	
						1,000	904.0	3.9		30	2.42	nne.	11.2	980	0	
1:33	973.5	10.3	48	nne.	5.8	827	923.8	4.5	1.30	38	3.20	nne.	11.2	811	0	
						750	932.3	5.5		39	3.88	nne.	10.6	735	0	
						500	961.2	8.7		43	4.84	nne.	8.5	490	0	
1:45	973.6	10.1	44	nne.	7.6	396	973.6	10.1		44	5.44	nne.	7.6	388		2/10 Cl., w.

## OBSERVATIONS AT DREXEL, MARCH, 1916.

51

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 18, 1916, series (No. 8).

Surface.						At different heights above sea.										Remarks.	
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. lty.	Electric.		
P. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.		
2:37	973.8	10.9	41	nne.	7.2	396	973.8	10.9		41	5.35	nne.	7.2	888	.....	5/10 Cl., w.	
						500	961.8	9.5		42	4.90	nne.	8.1	490	0		
						750	932.9	6.1		43	4.05	nne.	10.3	735	0		
2:46	973.8	10.8	42	nne.	6.7	794	927.9	5.5	1.30	43	3.88	nne.	10.7	779	0		
						1,000	904.6	4.0				nne.	10.6	980	180		
3:02	973.8	11.0	37	nne.	7.2	1,165	886.6	2.8	0.73			nne.	10.5	1,142	310		
						1,250	877.1	2.3				nne.	10.8	1,225	270		
						1,500	850.5	0.9				n.	11.5	1,470	180		
3:18	973.9	10.8	36	nne.	8.0	1,561	844.1	0.6	0.56			n.	11.7	1,530	150	4/10 Cl., w.; 1/10 Cl., w.	
4:14	974.0	10.3	37	nne.	6.3	1,677	832.0	1.5	-0.78			nne.	8.6	1,644	80		
						1,750	824.6	1.3				nne.	8.8	1,715	30		
						2,000	799.5	0.4				nne.	9.6	1,960	390		
						2,250	775.0	-0.4				nne.	10.3	2,205	280		
4:41	974.1	10.0	39	nne.	5.8	2,318	768.2	-0.6	0.31			nne.	10.5	2,271	380		
						2,350	775.0	-0.4				nne.	10.4	2,205	350		
						2,000	799.5	0.3				nne.	10.0	1,960	220		
5:07	974.2	9.7	37	nne.	5.4	1,936	806.9	0.5	0.33		6	0.38	nne.	9.9	1,897	180	6/10 Cl., w.
						1,750	824.6	1.1			9	0.60	n.	10.3	1,715	80	
5:24	974.4	9.2	36	nne.	6.3	1,506	850.1	1.9	-1.19		14	0.98	nne.	10.8	1,470	0	
						1,600	850.5	1.8			14	0.97	nne.	10.8	1,470	0	
5:26	974.4	9.2	36	nne.	6.3	1,380	863.4	0.4	0.83		15	0.94	n.	10.8	1,353	0	3/10 Cl., w.; 2/10 Cl.St., w.
						1,280	877.1	1.5			19	1.29	n.	10.3	1,225	0	
						1,000	904.6	3.5			27	2.12	n.	9.3	980	0	
5:41	974.5	8.9	35	n.	4.5	787	929.2	8.3	0.84		33	2.94	n.	8.5	772	0	
						750	933.1	5.6			33	3.00	n.	8.2	735	0	
						500	962.2	7.7			35	3.68	n.	6.2	490	0	
5:46	974.5	8.6	36	n.	5.4	396	974.5	8.6			36	4.02	n.	5.4	388	.....	5/10 Cl., w.; 4/10 Cl.St., w.

March 19, 1916.

A. M.																Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.	Vel.	Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.	Wind.	Potential.	Grav. lty.	Electric.		
9:48	979.5	2.3	44	sse.	8.0	396	979.5	2.3		44	3.17	sse.	8.0	388	.....	10/10 Cl.St., nw.
						500	966.6	1.4		45	3.04	sse.	10.0	490	150	
						750	937.0	-0.7		48	2.76	sse.	14.8	735	800	
9:56	979.4	2.1	44	se.	7.6	789	932.6	-1.0	0.84	48	2.70	sse.	15.5	774	540	Solar halo 9:56 to 10:14 a. m.
						1,000	908.0	-0.2		42	2.52	sse.	12.8	980	680	
10:06	979.3	2.4	43	sse.	8.0	1,116	895.0	0.2	-0.37	39	2.42	sse.	11.3	1,094	755	
						1,250	880.0	1.0		38	2.50	s.	12.3	1,225	960	
						1,500	853.2	2.6		38	2.80	sw.	14.0	1,470	1,330	
10:25	979.0	2.7	44	se.	9.4	1,717	830.8	4.0	-0.63	37	3.01	sw.	15.6	1,683	1,450	8/10 Cl.St., nw.; 2/10 A.St., wnw.
						1,750	827.1	3.9		39	3.15	sw.	15.7	1,715	1,460	
						2,000	802.1	2.9		54	4.07	sw.	16.6	1,960	1,540	
						2,250	777.8	2.0		68	4.80	sw.	17.4	2,205	1,750	
						2,500	754.1	1.0		83	5.45	w.	18.3	2,450	2,000	
10:55	978.5	3.4	41	sse.	8.0	2,607	744.1	0.5	0.38	89	5.65	w.	18.7	2,554	2,100	4/10 Cl., nw.; 4/10 Cl.St., nw.; few A.Cu., w.
						2,750	731.1	-0.3		90	5.36	w.	18.2	2,694	2,640	
						3,000	708.7	-2.0		90	4.65	wnw.	17.3	2,939	3,500	
						3,250	686.3	-3.6		90	4.07	wnw.	16.4	3,184	3,400	
11:50	978.2	6.6	33	sse.	6.7	3,375	675.4	-4.4	0.62	91	3.64	wnw.	15.9	3,306	.....	
						3,250	686.3	-3.7		92	4.12	wnw.	16.7	3,184	.....	
						3,000	708.2	-2.2		93	4.73	wnw.	18.2	2,939	.....	Altitude of A.Cu. base about 3,000 m.
						2,750	730.1	-0.8		94	5.37	w.	19.8	2,694	.....	
P. M.																
12:13	978.0	7.5	28	sse.	7.2	2,734	731.6	-0.7	0.34	94	5.41	w.	19.9	2,679	2,450	3/10 Cl., nw.; 4/10 A.St., wnw.; few A.Cu., w.
						2,500	752.9	0.1		83	5.10	w.	19.0	2,450	2,140	
						2,250	776.6	1.0		70	4.00	sw.	18.0	2,205	1,680	
						2,000	801.1	1.8		58	4.04	sw.	17.1	1,960	1,300	
12:32	977.9	7.2	28	se.	7.2	1,899	811.9	2.1	-0.20	53	3.77	sw.	16.7	1,861	1,180	
						1,750	826.5	1.8		48	3.34	sw.	16.6	1,715	1,000	
						1,500	852.3	1.3		40	2.68	sw.	16.5	1,470	770	
						1,250	879.0	0.8		33	2.14	s.	16.4	1,225	615	
12:52	977.8	6.7	31	sse.	5.8	1,089	897.6	0.5	0.58	28	1.77	s.	16.3	1,068	410	5/10 Cl.St., nw.; 5/10 A.Cu., w.
						1,000	907.0	1.0		28	1.84	s.	14.7	980	280	
12:56	977.7	6.8	30	s.	7.2	801	930.2	2.1	1.06	28	1.99	sse.	11.2	785	0	
						750	935.8	2.6		29	2.14	sse.	10.6	735	0	
						500	964.9	5.3		29	2.58	sse.	7.6	490	0	
1:05	977.5	6.4	30	sse.	6.3	396	977.5	6.4		30	2.88	sse.	6.3	388	.....	



TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 20, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
8:43	961.1	8.0	74	sw.	8.5	396	961.1	8.0	-----	74	7.94	sw.	8.5	388	-----	6/10 Cl, w.; 4/10 ClS
8:44	961.1	8.2	73	sw.	8.5	500	949.1	6.8	-----	72	7.11	wsww.	11.6	490	170	
8:50	961.1	8.9	73	sw.	8.9	525	946.1	6.5	1.16	72	6.97	wsww.	12.3	515	210	
8:50	961.1	8.9	73	sw.	8.9	738	922.3	13.1	-3.10	43	6.48	wnww.	18.6	724	730	
8:50	961.0	9.8	70	sw.	8.0	750	920.0	13.3	-----	42	6.41	wnww.	18.4	735	750	
8:50	961.0	9.8	70	sw.	8.0	986	895.7	17.6	-1.81	32	6.44	wnww.	16.2	967	900	
9:04	961.0	10.4	66	sw.	7.6	1,000	893.9	17.6	-----	32	6.44	wnww.	16.2	980	920	
9:04	961.0	10.4	66	sw.	7.6	1,166	876.9	17.6	0.00	27	5.44	wnww.	16.5	1,143	1,000	1/10 Cl, w.; 2/10 ClSt., w.
9:15	961.0	11.0	67	sw.	8.0	1,250	868.2	17.1	-----	27	5.26	wnww.	16.3	1,225	1,050	
9:15	961.0	11.0	67	sw.	8.0	1,500	843.2	15.9	-----	26	4.70	wnww.	16.0	1,470	1,190	
9:15	961.0	11.0	67	sw.	8.0	1,534	840.0	15.7	0.52	26	4.64	wnww.	15.9	1,504	1,200	
9:15	961.0	11.0	67	sw.	8.0	1,750	818.5	13.7	-----	28	4.39	wnww.	15.6	1,715	1,250	
9:15	961.0	11.0	67	sw.	8.0	2,000	794.3	11.4	-----	30	4.04	wnww.	15.3	1,960	1,300	
9:15	961.0	11.0	67	sw.	8.0	2,250	771.0	9.0	-----	31	3.56	wnww.	15.0	2,205	1,350	
9:53	960.8	13.7	57	sw.	7.2	2,470	750.8	6.9	0.94	33	3.28	wnww.	14.7	2,420	1,400	2/10 ClSt., w.
9:53	960.8	13.7	57	sw.	7.2	2,500	747.7	6.6	-----	34	3.32	wnww.	14.7	2,450	1,430	
9:53	960.8	13.7	57	sw.	7.2	2,750	725.0	4.4	-----	40	3.35	wnww.	15.0	2,694	1,600	
10:34	960.6	15.8	50	wsww.	4.5	3,000	703.1	2.1	-----	46	3.27	wnww.	15.3	2,939	1,540	4/10 Cl, w.
10:34	960.6	15.8	50	wsww.	4.5	3,209	685.3	0.2	0.91	51	3.16	wnww.	15.5	3,144	1,280	
10:34	960.6	15.8	50	wsww.	4.5	3,250	681.9	-0.1	-----	52	3.15	wnww.	15.5	3,184	1,250	
10:34	960.6	15.8	50	wsww.	4.5	3,500	660.9	-2.1	-----	57	2.92	wnww.	15.6	3,429	-----	
11:46	960.5	18.6	39	nw.	5.4	3,748	640.6	-4.0	0.81	59	2.58	wnww.	15.6	3,671	-----	2/10 Cl, w.
11:46	960.5	18.6	39	nw.	5.4	3,500	660.9	-1.9	-----	58	3.03	wnww.	15.6	3,429	-----	
11:46	960.5	18.6	39	nw.	5.4	3,250	681.9	0.2	-----	57	3.53	wnww.	15.7	3,184	-----	
11:46	960.5	18.6	39	nw.	5.4	3,000	703.1	2.3	-----	56	4.04	wnww.	15.7	2,939	-----	
P. M.																
12:07	960.5	18.3	40	wnww.	3.6	2,948	707.9	2.7	0.86	56	4.16	wnww.	15.7	2,888	780	
12:07	960.5	18.3	40	wnww.	3.6	2,750	725.0	4.4	-----	53	4.44	wnww.	15.8	2,694	740	
12:07	960.5	18.3	40	wnww.	3.6	2,500	747.7	6.6	-----	50	4.88	wnww.	16.0	2,450	670	
12:07	960.5	18.3	40	wnww.	3.6	2,250	771.0	8.7	-----	46	5.18	wnww.	16.1	2,205	340	
12:34	960.5	18.6	39	wnww.	4.5	2,101	784.8	10.0	0.72	44	5.40	wnww.	16.2	2,059	170	9/10 ClSt., wnww.
12:34	960.5	18.6	39	wnww.	4.5	2,000	794.3	10.7	-----	42	5.41	wnww.	15.9	1,960	150	
12:34	960.5	18.6	39	wnww.	4.5	1,750	818.5	12.5	-----	38	5.51	wnww.	15.2	1,715	90	
12:34	960.5	18.6	39	wnww.	4.5	1,500	843.2	14.3	-----	35	5.70	nw.	14.4	1,470	20	
1:00	960.5	19.7	39	wnww.	3.6	1,267	866.9	16.0	-0.26	31	5.64	nw.	13.7	1,242	0	
1:00	960.5	19.7	39	wnww.	3.6	1,250	868.2	16.0	-----	31	5.64	nw.	13.5	1,225	0	
1:00	960.5	19.7	39	wnww.	3.6	1,000	894.7	15.3	-----	31	5.39	wnww.	10.6	980	0	
1:04	960.5	19.6	39	w.	3.6	764	919.9	14.7	1.33	31	5.19	w.	7.9	749	0	
1:04	960.5	19.6	39	w.	3.6	750	920.7	14.9	-----	31	5.25	w.	7.7	735	0	
1:06	960.5	19.6	39	w.	3.6	500	948.9	18.2	-----	37	7.73	w.	4.8	490	0	
1:06	960.5	19.6	39	w.	3.6	396	960.5	19.6	-----	39	8.90	w.	3.6	388	-----	10/10 ClSt., wnww.

March 21, 1916.

A. M.																	
8:29	954.6	6.8	77	e.	8.5	396	954.6	6.8		77	7.61	e.	8.5	388		10/10 St., wsw.	
						500	942.3	8.5		71	7.88	se.	12.1	490	0		
						750	914.3	12.5		55	7.97	sse.	20.6	735	0		
8:47	954.4	7.1	77	ese.	8.5	784	910.8	13.0	-1.60	53	7.94	sse.	21.8	769	0		
						1,000	887.1	14.0		50	7.99	sse.	20.4	980	0		
8:58	954.0	7.3	74	ese.	8.5	1,163	870.4	14.8	-0.48	48	8.08	sse.	19.3	1,140	0		
						1,250	861.3	15.2		48	8.29	sse.	20.2	1,225	260		
9:02	954.0	7.4	74	ese.	8.0	1,469	839.7	16.1	-0.42	48	8.78	s.	22.6	1,440	900		
						1,500	836.1	15.9		47	8.49	s.	22.6	1,470	990		
						1,750	811.7	14.6		40	6.65	SSW.	22.2	1,715	1,390		
						2,000	787.9	13.2		34	5.16	SSW.	21.9	1,960	1,640		
9:31	953.3	8.2	71	ese.	8.0	2,250	764.7	11.9		27	3.76	SW.	21.5	2,205	2,020		
						2,269	763.0	11.8	0.54	26	3.60	SW.	21.5	2,224	2,060	3/10 A. St., w.; 7/10 A. Cu., wsw.	
						2,500	742.0	10.0		26	3.19	SW.	21.8	2,450	2,500		
						2,750	720.0	8.0		26	2.79	SW.	22.1	2,694	2,970		
						3,000	698.3	6.1		26	2.45	SW.	22.4	2,939	3,450		
10:12	952.3	9.4	66	se.	8.5	3,135	686.8	5.1	0.76	26	2.29	SW.	22.6	3,071	3,700		
						3,000	698.3	6.1		26	2.45	SW.	22.6	2,939	3,460		
						2,750	719.3	8.0		25	2.68	SW.	22.5	2,694	3,020		
						2,500	740.9	9.9		25	3.05	SSW.	22.5	2,450	2,570		
						2,250	763.1	11.8		24	3.32	SSW.	22.4	2,205	2,310		
11:15	950.1	11.8	61	se.	10.2	2,108	776.1	12.8	0.58	24	3.55	SSW.	22.4	2,066	2,200	7/10 A. St., w.; 3/10 A. Cu., wsw.	
						2,000	785.7	13.4		24	3.69	SSW.	23.1	1,960	2,020		
						1,750	808.9	14.9		25	4.24	SSW.	24.6	1,715	1,630		
						1,509	832.8	16.3		25	4.63	s.	26.1	1,470	1,340		
11:46	948.4	13.5	58	se.	12.1	1,247	858.0	17.8	0.52	26	5.30	s.	27.6	1,222	1,080		
						1,000	882.2	19.1		30	6.62	sse.	24.9	980	460		
11:57	947.8	13.9	56	se.	13.4	900	893.0	19.6	-1.07	31	7.07	sse.	23.8	882	160		
P. M.																	
12:04	947.5	13.9	56	se.	14.8	788	904.4	18.4	-2.65	54	11.43	sse.	22.6	773	0		
						750	908.2	17.4		56	11.13	sse.	22.8	785	0		
12:07	947.4	14.0	56	se.	15.2	554	929.9	12.2	1.27	66	9.38	se.	24.1	543	0		
						500	935.7	12.9		63	9.37	se.	20.0	490	0		
12:13	947.3	14.2	56	se.	12.1	396	947.3	14.2		56	9.07	se.	12.1	388		8/10 A. St., w.; 2/10 A. Cu., wsw.	

## OBSERVATIONS AT DREXEL, MARCH, 1916.

53

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 22, 1916.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap- pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%	n.	m. p. s.	m.	mb.	° C.		%	mb.	m. p. s.	10° ergs.	volts.		
11:18.....	969.7	2.8	75	n.	4.0	396	969.7	2.8	.....	75	5.60	n.	4.0	388	.....	10/10 St.Cu., n.
.....	.....	.....	.....	.....	.....	500	957.0	1.5	.....	78	5.31	n.	5.6	490	0	
11:30.....	969.8	3.6	72	n.	5.8	712	932.4	-1.0	1.20	83	4.66	n.	9.0	698	0	
.....	.....	.....	.....	.....	.....	750	928.0	-1.3	.....	84	4.60	n.	9.1	735	0	Altitude of St.Cu. base about 1,000 m.
11:59.....	970.0	4.4	74	nne.	4.9	1,000	899.5	-3.1	.....	92	4.33	nnw.	9.4	960	0	
.....	.....	.....	.....	.....	.....	1,125	885.5	-4.0	0.73	96	4.20	nnw.	9.6	1,103	0	
.....	.....	.....	.....	.....	.....	1,250	871.7	-4.9	.....	86	3.48	nnw.	9.4	1,225	0	
.....	.....	.....	.....	.....	.....	1,500	844.3	-6.6	.....	67	2.34	n.	8.9	1,470	.....	
P. M.																
12:36.....	969.8	4.0	67	n.	4.9	1,538	840.1	-6.9	0.72	64	2.18	n.	8.8	1,607	.....	7/10 St.Cu., n.
.....	.....	.....	.....	.....	.....	1,500	844.3	-6.6	.....	66	2.31	n.	8.8	1,470	.....	
.....	.....	.....	.....	.....	.....	1,250	871.7	-4.8	.....	83	3.39	n.	8.6	1,225	0	
12:46.....	969.7	4.0	65	n.	4.9	1,173	880.5	-4.2	1.05	88	3.78	n.	8.5	1,150	0	
.....	.....	.....	.....	.....	.....	1,000	899.5	-2.4	.....	81	4.05	n.	7.9	980	0	4/10 St.Cu., n.
.....	.....	.....	.....	.....	.....	750	928.0	0.2	.....	71	4.40	nne.	7.0	735	0	
1:43.....	969.4	5.5	55	nne.	4.0	543	952.0	2.4	2.31	62	4.50	nne.	6.2	532	0	
.....	.....	.....	.....	.....	.....	500	957.0	3.4	.....	61	4.76	nne.	5.6	490	0	
1:55.....	969.3	5.8	57	nne.	4.0	396	969.3	5.8	.....	57	5.20	nne.	4.0	388	.....	

March 23, 1916.

A. M.																
8:32	962.3	2.1	71	sse.	10.7	396	962.3	2.1	71	5.05	sse.	10.7	388		3/10 Cl., w.; 4/10 Cl.St., w.	
						500	949.8	0.3	71	4.43	s.	21.8	490			
8:33	962.3	1.9	72	sse.	10.7	509	948.9	0.1	1.77	71	4.37	s.	22.8	499		
						750	920.6	2.4		57	4.14	s.	24.8	735		
8:40	962.4	1.8	72	sse.	8.5	778	917.7	2.7	-0.97	55	4.08	s.	25.0	763		
						1,000	892.8	3.8		50	4.01	s.	21.5	980		
						1,250	865.8	5.0		45	3.92	s.	17.5	1,225		
9:01	962.5	3.4	67	sse.	8.0	1,470	843.2	6.1	-0.49	40	3.77	s.	14.0	1,441	5/10 Cl., w.; 1/10 Cl.St., w.	
						1,500	840.0	6.5		38	3.68	s.	14.3	1,470		
9:06	962.4	3.8	66	sse.	10.3	1,661	823.8	8.6	-1.31	27	3.02	s.	15.8	1,628		
						1,750	814.9	8.0		28	3.00	s.	16.0	1,715		
						2,000	790.0	6.4		29	2.79	s.	16.7	1,960		
						2,250	766.0	4.9		31	2.68	ssw.	17.4	2,205		
						2,500	742.9	3.3		32	2.48	ssw.	18.1	2,450		
9:41	962.0	3.8	66	sse.	8.9	2,626	731.8	2.5	0.63	33	2.41	ssw.	18.5	2,573	3/10 Cl., w.; 6/10 A.Cu., sw.	
						2,750	720.3	1.5		41	2.79	ssw.	18.1	2,694		
						3,000	698.2	-0.6		57	3.31	sw.	17.2	2,939		
10:15	961.6	4.2	65	sse.	12.5	3,148	685.5	-1.8	0.76	66	3.47	sw.	16.7	3,084		
						3,000	698.2	-0.8		62	3.54	sw.	16.9	2,939		
						2,750	720.3	1.0		55	3.61	sw.	17.2	2,694		
						2,500	742.9	2.7		48	3.56	ssw.	17.4	2,450		
10:50	961.1	5.3	65	sse.	10.7	2,354	756.4	3.7	0.68	44	3.50	ssw.	17.6	2,307		
						2,250	766.0	4.4		44	3.68	ssw.	19.2	2,205		
						2,000	789.3	6.1		44	4.14	ssw.	23.0	1,960		
						1,750	813.8	7.8		45	4.76	ssw.	26.8	1,715		
11:19	960.6	5.4	64	sse.	12.1	1,602	828.7	8.8	-1.34	45	5.10	ssw.	29.0	1,570	3/10 Cl.St., w.; 5/10 A.St., wsw.; 2/10 A.Cu., sw.	
						1,500	838.6	7.4		41	4.22	ssw.	26.9	1,470	Rain 11:23 to 11:38 a. m.	
11:29	960.4	4.9	68	sse.	7.6	1,282	861.4	4.5	3.02	33	2.78	s.	22.5	1,257		
						1,250	864.3	5.5		34	3.07	s.	22.3	1,225		
11:34	960.3	5.0	67	sse.	9.4	1,186	871.2	7.4	-1.41	37	3.81	s.	22.0	1,163	5/10 A. St., wsw.; 2/10 A. Cu., sw.	
						1,000	891.0	4.8		51	4.39	ssw.	21.7	990		
						831	910.0	2.4	0.62	64	4.65	ssw.	21.5	815		
11:43	960.1	5.0	67	sse.	8.5	750	918.7	2.9		65	4.89	ssw.	18.9	735		
						500	947.2	4.5		66	5.56	ssw.	10.9	490		
11:51	959.9	5.1	67	ssw.	7.6	396	959.9	5.1		67	5.80	ssw.	7.6	388	10/10 A.St., sw.	

March 24, 1916 (No. 1).

A. M.																
8:31.....	950.2	11.6	82	s.	10.7	396	950.2	11.6	82	11.20	s.	10.7	388	.....	4/10 Cl., sw.; light fog, s.	
						500	938.1	12.2	74	10.52	s.	12.9	490	150		
						750	910.8	13.6	55	8.57	ssw.	18.0	735	480		
8:56.....	950.2	12.7	78	ssw.	9.8	1,000	884.4	15.0	36	6.14	sw.	23.2	980	880	8/10 Cl., sw.; light fog, ssw.	
						1,134	870.4	15.7	-0.56	26	4.64	sw.	26.0	1,112	1,100	
						1,250	858.7	15.0	25	4.26	sw.	25.2	1,225	1,090		
9:10.....	950.3	13.3	75	ssw.	8.9	1,500	833.9	13.5	24	3.71	sw.	23.4	1,470	1,080		
						1,552	828.7	13.2	0.60	24	3.64	sw.	23.0	1,521	1,075	
						1,750	808.5	12.3	18	2.58	sw.	26.5	1,715	1,380		
						2,000	785.0	11.1	10	1.32	sw.	30.9	1,960	.....		
9:31.....	950.4	14.0	74	ssw.	0.8	2,047	780.8	10.9	0.73	9	1.17	sw.	31.7	2,006	.....	
						2,000	785.0	11.4	7	0.94	sw.	31.1	1,960	.....		
9:40.....	950.5	14.4	71	ssw.	10.3	1,845	799.8	12.9	-5.79	1	0.15	sw.	29.0	1,808	1,600	
9:54.....	950.6	14.9	69	ssw.	10.7	1,807	803.4	10.7	0.45	4	0.51	sw.	27.5	1,771	1,530	
						1,750	809.6	11.0		6	0.79	sw.	26.9	1,715	1,420	
						1,500	832.7	12.1		14	1.98	sw.	24.2	1,470	1,110	
						1,250	858.2	13.2		21	3.19	sw.	21.6	1,225	980	
10:25.....	950.9	15.6	69	ssw.	12.1	1,078	876.6	14.0	-1.65	26	4.15	sw.	19.8	1,057	840	
						1,000	884.7	12.7		46	6.76	sw.	20.0	980	770	
10:33.....	951.0	15.6	68	ssw.	12.1	914	894.2	11.3	0.54	68	9.11	ssw.	20.3	886	640	
						750	912.2	12.2		75	10.66	ssw.	17.9	735	260	
10:42.....	951.1	15.6	69	ssw.	13.4	691	918.5	12.5	1.05	78	11.30	ssw.	17.0	678	100	
						500	939.7	14.5		71	11.72	ssw.	15.0	490	0	
10:48.....	951.2	15.6	67	ssw.	13.9	396	951.2	15.6		67	11.87	ssw.	13.9	388	.....	
															6/10 A.St., sw.; 4/10 St.Cu., sw.; light fog, ssw.	

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 24, 1916 (No. 2).

Surface.						At different heights above sea.											Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.		
P. M.	mb.	° C.	%	m. p. s.	m. p. s.	m.	mb.	° C.		%	mb.	m. p. s.	m. p. s.	10 <sup>6</sup> ergs.	volts.		
12:51	951.4	18.4	50	ssw.	9.4	396	951.4	18.4		50	12.48	ssw.	9.4	388		5/10 Cl.St., sw.; light haze.	
						500	940.0	17.4		62	12.32	ssw.	9.5	490	0		
1:02	951.4	18.8	50	ssw.	8.0	714	916.6	15.2	1.01	67	11.57	s.	9.8	700	0		
						750	912.6	15.0		65	11.08	s.	10.4	735	30		
						1,000	885.9	13.5		54	8.35	s.	14.2	980	340		
1:08	951.4	19.1	55	ssw.	8.5	1,106	874.9	12.9	0.59	49	7.29	s.	15.8	1,084	470		
1:17	951.3	19.4	55	ssw.	10.3	1,177	867.4	15.3	-3.38	31	5.39	ssw.	15.4	1,154	515	2/10 Cl.St., sw.; light haze.	
						1,250	860.0	14.7		32	5.35	ssw.	15.7	1,225	570		
						1,500	834.8	12.6		34	4.96	ssw.	16.6	1,470	690		
						1,750	810.3	10.6		35	4.47	ssw.	17.5	1,715	1,060		
						2,000	786.2	8.6		37	4.13	ssw.	18.4	1,960	1,180		
1:45	951.2	20.7	52	ssw.	8.5	2,027	784.0	8.4	0.81	37	4.08	ssw.	18.5	1,986	1,180		
						2,250	762.8	6.3		47	4.49	ssw.	18.6	2,205	1,200		
						2,500	739.9	4.0		58	4.72	ssw.	18.7	2,450	1,230		
1:59	951.2	21.0	50	ssw.	8.0	2,715	720.8	1.9	0.94	68	4.77	ssw.	18.8	2,660	1,250		
						2,750	717.9	1.7		67	4.63	ssw.	19.1	2,694	1,230	3/10 Cl.St., sw.; light haze.	
						3,000	695.9	0.3		58	3.62	ssw.	21.5	2,939	1,080		
						3,250	674.8	-1.1		50	2.78	sw.	23.9	3,184			
2:40	951.3	21.6	53	ssw.	8.5	3,500	653.8	-2.5		42	2.08	sw.	26.3	3,429			
						3,685	638.6	-3.6	0.62	35	1.68	sw.	28.0	3,609		3/10 St.Cu., sw.; light haze.	
						3,500	653.8	-2.3		39	1.97	sw.	27.1	3,429			
						3,250	674.8	-0.6		44	2.56	sw.	25.8	3,184	1,130		
						3,000	696.2	1.1		49	3.24	sw.	24.6	2,939	910		
3:15	951.3	21.9	52	s.	9.8	2,750	718.3	2.8		54	4.03	sw.	23.4	2,694	680		
						2,721	720.8	3.0	0.76	54	4.09	sw.	23.2	2,666	660		
						2,500	740.3	4.7		53	4.53	sw.	21.3	2,450	430		
						2,250	763.2	6.6		53	5.17	ssw.	18.7	2,205	160		
						2,000	786.8	8.5		52	5.77	ssw.	16.1	1,960	0		
3:30	951.3	21.5	53	ssw.	10.3	1,920	794.7	9.1	0.83	52	6.01	ssw.	15.3	1,882	0	1/10 St.Cu., sw.	
						1,750	810.8	10.5		51	6.48	ssw.	15.0	1,715	0		
						1,500	835.2	12.6		49	7.15	s.	14.6	1,470	0		
						1,250	860.6	14.7		47	7.86	s.	14.2	1,225	0		
3:50	951.3	21.2	50	s.	8.5	1,125	873.6	15.7	0.41	46	8.21	s.	14.0	1,103	0		
						1,000	886.2	16.2		49	9.03	s.	14.4	980	0		
4:01	951.3	20.9	52	s.	9.8	811	906.4	17.0	0.87	54	10.47	s.	15.0	795	0	Cloudless.	
						750	912.6	17.5		54	10.80	s.	14.1	735	0		
						500	940.0	19.7		53	12.16	s.	10.4	490	0		
4:07	951.3	20.6	52	s.	8.9	396	951.3	20.6		52	12.62	s.	8.9	388			

March 25, 1916.

P. M.															
1:52	962.6	-0.2	94	n.	8.9	396	962.6	-0.2	94	5.65	n.	8.9	388		10/10 St., nne.
						500	950.0	-0.7	95	5.47	n.	11.4	490	0	Misting.
						750	920.5	-1.9	98	5.12	nne.	17.4	735	0	Altitude of St. base about 700 m.
						1,000	892.1	-3.1	100	4.71	nne.	23.4	980	0	
1:55	962.6	-0.1	93	n.	8.0	1,058	885.8	-3.3	100	4.64	nne.	24.6	1,037	0	
						1,250	864.3	2.3	96	6.92	nne.	21.0	1,225	0	
2:12	962.5	-0.1	92	n.	8.5	1,263	863.4	2.7	96	7.12	nne.	20.8	1,238	0	
						1,250	864.3	2.5	96	7.02	nne.	20.8	1,225	0	
						1,000	892.1	-2.4	95	4.75	nne.	21.6	980	720	
2:33	962.5	-0.1	92	nne.	8.5	956	897.1	-3.2	95	4.45	nne.	21.7	937	960	
						750	920.5	-2.1	94	4.82	nne.	16.8	735	2,050	Ice on wire.
						500	950.0	-0.7	93	5.36	nne.	11.0	490	710	Misting.
2:50	962.5	-0.1	92	nne.	8.5	396	962.5	-0.1	92	5.58	nne.	8.5	388		10/10 St., nne.

March 26, 1916.

A. M.																
9:51	973.1	-1.0	80	nne.	6.7	396	973.1	-1.0		80	4.50	nne.	6.7	388	6/10 A.St., ne.; 3/10 St.Cu., ne.	
						500	960.2	-1.2		79	4.37	nne.	10.0	490		
9:53	973.2	-1.0	80	nne.	6.3	692	937.4	-1.7	0.24	77	4.08	ne.	16.0	679		0
						756	931.0	-0.7		68	3.92	ne.	17.8	735		0
						1,000	902.5	3.7		30	2.39	ne.	25.6	980	870	
10:08	973.3	-0.7	87	n.	6.7	1,029	899.4	4.2	-1.75	26	2.14	ne.	26.5	1,009	890	
						1,250	875.0	3.8		24	1.92	ne.	27.7	1,225	1,070	
						1,500	848.4	3.3		22	1.70	ne.	29.0	1,470	1,500	
						1,750	823.0	2.8		20	1.60	ne.	30.4	1,715	1,630	
10:33	973.5	0.0	83	nne.	7.2	1,945	803.5	2.4	0.20	19	1.38	ne.	31.4	1,906	2,250	
						2,000	798.0	2.1		19	1.35	ne.	31.4	1,960	2,330	
						2,250	773.7	0.7		19	1.22	ne.	31.6	2,205	2,660	
10:48	973.5	-0.1	80	nne.	6.3	2,281	770.7	0.5	0.46	19	1.20	ne.	31.6	2,235	2,700	
						2,250	773.7	0.6		19	1.21	ne.	31.4	2,205	2,630	
						2,000	798.0	1.4		19	1.28	ne.	29.6	1,960	1,980	
						1,750	823.0	2.3		20	1.44	ne.	27.9	1,715	1,510	
11:35	973.4	0.6	79	n.	6.7	1,617	836.9	2.8	0.30	20	1.49	ne.	27.0	1,585	1,330	
						1,500	848.4	3.1		20	1.53	ne.	26.6	1,470		
						1,250	875.0	3.8		20	1.60	ne.	25.8	1,225		
						1,000	902.5	4.6		19	1.61	ne.	25.1	980		
P. M.																
12:01	973.3	1.0	79	n.	6.7	975	905.7	4.7	-1.27	19	1.62	ne.	25.0	956		
						750	931.0	1.8		23	1.60	nne.	18.1	735		
12:06	973.3	1.2	79	n.	7.2	653	942.6	0.6	0.23	25	1.60	nne.	15.1	640		
						500	960.5	1.0		27	3.74	n.	10.4	490		
12:08	973.3	1.2	79	n.	7.2	396	973.3	1.2		79	5.26	n.	7.2	388	8/10 Cl.St., ne.; 1/10 A.St., ne.	



## OBSERVATIONS AT DREXEL, MARCH, 1916.

55

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 28, 1916, series (No. 1).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav.	Electric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10° cgs.	volts.	
6:26	969.4	1.0	79	sse.	4.5	396	969.4	1.0		79	5.19	sse.	4.5	388		Cloudless.
						500	957.1	6.0		57	5.33	sse.	6.6	490	0	
6:31	969.5	1.1	79	sse.	4.5	573	948.8	9.5	-4.80	41	4.87	sse.	8.0	562	0	
						750	929.0	10.7		28	3.60	s.	7.2	735	0	
6:51	969.6	1.7	78	se.	4.9	803	923.0	11.1	-0.70	24	3.17	s.	7.0	787	0	
						1,000	901.5	11.6		16	2.19	sse.	7.6	980	0	
10:40	969.4	11.9	48	sse.	4.0	1,091	892.8	11.9	-0.28	13	1.81	se.	7.9	1,070	0	Few Cl.St., nw.
						1,250	875.1	11.4		19	2.56	se.	7.7	1,225	0	
						1,500	849.5	10.5		30	3.81	sse.	7.5	1,470		
P. M.																
12:38	967.9	16.2	38	sse.	4.0	1,509	848.6	10.5	0.33	30	3.81	sse.	7.5	1,479		
						1,750	824.2	9.3		30	3.52	sse.	6.0	1,715		
						2,000	799.1	8.0		30	3.22	sse.	4.5	1,960		
12:44	967.8	16.4	38	sse.	4.5	2,032	796.0	7.8	0.48	30	3.17	sse.	4.3	1,991		
						2,000	799.1	7.9		30	3.20	sse.	4.4	1,960		
						1,750	823.2	9.0		32	3.67	sse.	5.2	1,715	260	
1:01	967.6	16.6	37	sse.	5.4	1,602	837.8	9.7	0.46	33	3.97	sse.	5.6	1,570	260	
						1,500	848.0	10.2		32	3.98	sse.	6.1	1,470	170	
						1,250	873.5	11.4		30	4.04	sse.	7.4	1,225	0	
						1,000	900.0	12.5		27	3.91	sse.	8.8	980	0	
1:26	967.1	17.2	32	sse.	4.9	950	905.3	12.7	-1.12	27	3.97	sse.	9.1	991	0	
1:28	967.1	17.3	33	sse.	4.9	870	914.1	11.8	0.94	27	3.74	sse.	9.1	853	0	
						750	927.1	12.9		28	4.17	sse.	8.1	735	0	
1:34	967.0	17.7	34	sse.	5.4	616	942.3	14.2	1.59	30	4.86	sse.	7.0	604	0	
						500	954.9	16.0		32	5.82	sse.	6.2	490	0	
1:41	966.9	17.7	33	sse.	5.4	396	966.9	17.7		33	6.68	sse.	5.4	388		1/10 Cl., nw.

March 28, 1916, series (No. 2).

P. M.																
2:17	966.4	18.4	29	sse.	5.4	396	966.4	18.4		29	6.14	sse.	5.4	388		1/10 Cl., nw.
						500	954.4	17.0		31	6.01	sse.	6.3	490	0	
2:25	966.3	18.7	31	sse.	5.4	737	928.2	13.9	1.32	35	5.56	sse.	8.5	723	0	
						750	926.6	13.8		35	5.52	sse.	8.6	735	0	
2:41	966.2	18.7	30	sse.	5.4	1,000	899.4	11.9		35	4.88	sse.	9.8	980	0	
						1,027	896.6	11.7	0.76	35	4.81	sse.	10.0	1,007	0	
2:55	966.1	18.7	29	sse.	6.7	1,250	873.0	11.5		32	4.48	sse.	11.4	1,225	0	
						1,297	868.0	11.5	0.07	33	4.48	sse.	11.7	1,271	0	
3:20	965.9	18.7	23	sse.	5.4	1,500	846.8	10.2		33	4.11	sse.	10.6	1,470	0	
						1,554	841.3	9.8	0.66	33	4.00	sse.	10.3	1,523	120	1/10 Cl., nw.
4:15	965.4	19.1	22	sse.	6.7	1,750	821.7	9.8		35	4.24	sse.	8.1	1,715	80	
4:18	965.3	19.1	22	sse.	7.2	1,756	820.8	9.8	0.00	35	4.24	sse.	8.0	1,721	80	
						1,937	803.0	9.1	0.28	34	3.93	sse.	8.5	1,898		
5:25	965.1	18.2	31	sse.	4.9	1,750	821.1	9.4		34	4.01	s.	10.6	1,715	370	
						1,584	837.7	9.7	0.22	34	4.09	s.	12.4	1,553	260	
						1,500	845.7	9.0		34	4.15	s.	12.3	1,470	200	
5:33	965.1	17.9	31	sse.	6.3	1,250	872.0	10.4		34	4.29	sse.	12.0	1,225	20	
						1,218	875.4	10.5	0.78	34	4.32	sse.	12.0	1,194	0	
5:48	965.0	17.2	34	sse.	5.8	1,000	898.3	12.2		33	4.69	sse.	12.8	980	0	
						796	920.6	13.8	0.80	33	5.21	sse.	13.5	780	0	
						750	925.3	14.2		33	5.34	sse.	12.6	735	0	
5:58	965.0	17.0	33	sse.	5.4	500	953.1	16.2		33	6.08	sse.	7.5	490	0	
						396	965.0	17.0		33	6.40	sse.	5.4	388		1/10 Cl., nw.

March 28, 1916, series (No. 3).

P. M.																
6:43	965.1	14.0	39	sse.	4.9	396	965.1	14.0		39	6.23	sse.	4.9	388		Few Cl.St., nw.
						500	953.3	15.0		41	6.99	sse.	5.7	490	0	
6:44	965.1	13.9	40	sse.	4.9	571	945.3	15.6	-0.91	42	7.44	sse.	6.2	560	0	
						750	925.3	14.3		40	6.52	sse.	7.6	725	0	
7:02	965.2	13.0	42	sse.	4.5	1,000	898.0	12.4		38	5.47	sse.	9.5	980	150	
						1,157	881.7	11.2	0.75	37	4.92	sse.	10.7	1,134	260	
						1,250	871.7	10.9		37	4.82	sse.	11.0	1,225	260	
7:11	965.2	12.5	43	sse.	5.4	1,500	846.1	9.9		38	4.64	s.	11.7	1,470	190	
						1,596	836.4	9.6	0.36	38	4.54	s.	12.0	1,564	170	
8:33	965.5	10.1	47	sse.	5.8	1,750	821.1	9.6		38	4.54	s.	8.6	1,715	330	Few Cl.St., nw.
						1,910	805.2	9.5	0.08	38	4.51	sse.	5.2	1,872		
8:55	965.6	10.2	48	sse.	6.3	1,750	821.1	9.7		37	4.41	s.	10.4	1,715	340	
						1,656	830.4	9.8	0.33	37	4.48	sse.	13.5	1,628	460	
						1,500	846.1	10.3		37	4.64	sse.	14.8	1,470	320	
9:05	965.6	10.0	48	sse.	6.7	1,250	872.3	11.1		37	4.89	sse.	16.8	1,225	70	
						1,231	874.1	11.2	0.32	37	4.92	sse.	17.0	1,207	40	
						1,000	898.8	11.9		37	5.15	sse.	15.9	980	0	
9:21	965.5	9.3	53	sse.	4.9	750	925.8	12.7		37	5.44	sse.	14.7	735	0	
						572	945.3	13.3	-2.33	37	5.65	sse.	13.8	561	0	
9:25	965.5	9.2	52	sse.	5.4	500	953.3	11.6		43	5.87	sse.	10.4	490	0	
						396	965.5	9.2		52	6.05	sse.	5.4	388		Cloudless.

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 28-29, 1916, series (No. 4).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
P. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
10:09.....	965.3	9.0	54	see.	6.3	396	965.3	9.0	.....	54	6.20	see.	6.3	388	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	953.0	10.7	.....	53	6.82	see.	13.1	490	0	
10:10.....	965.3	8.9	54	see.	6.3	617	940.0	12.6	-1.63	52	7.59	see.	20.8	605	0	
.....	.....	.....	.....	.....	.....	750	925.0	12.5	.....	47	6.81	see.	18.8	735	0	
.....	.....	.....	.....	.....	.....	1,000	897.7	12.2	.....	37	5.26	see.	15.1	980	0	
10:20.....	965.3	9.2	53	see.	6.7	1,025	895.3	12.2	0.10	36	5.12	see.	14.7	1,005	0	
10:26.....	965.2	9.3	54	see.	8.0	1,154	881.6	12.6	-0.31	35	5.11	see.	14.2	1,131	0	
.....	.....	.....	.....	.....	.....	1,250	871.5	12.2	.....	35	4.97	see.	13.5	1,225	60	
.....	.....	.....	.....	.....	.....	1,500	845.7	11.3	.....	35	4.66	see.	11.6	1,470	210	
.....	.....	.....	.....	.....	.....	1,750	820.5	10.2	.....	35	4.36	see.	9.8	1,715	390	
10:52.....	965.1	8.6	57	see.	7.2	1,861	809.9	9.7	0.41	35	4.21	see.	9.0	1,824	425	
.....	.....	.....	.....	.....	.....	2,000	796.1	8.6	.....	35	3.91	see.	8.6	1,960	620	
.....	.....	.....	.....	.....	.....	2,250	772.7	6.6	.....	35	3.41	see.	7.9	2,205	.....	
11:23.....	965.1	8.3	56	see.	7.2	2,495	749.8	4.7	0.75	35	2.99	see.	7.2	2,445	.....	
.....	.....	.....	.....	.....	.....	2,250	772.7	6.4	.....	35	3.36	see.	9.0	2,205	.....	
.....	.....	.....	.....	.....	.....	2,000	796.1	8.2	.....	34	3.70	see.	10.8	1,960	.....	
.....	.....	.....	.....	.....	.....	1,750	820.5	10.0	.....	34	4.18	see.	12.6	1,715	90	
11:53.....	965.2	8.0	56	see.	8.0	1,639	831.6	10.8	0.37	34	4.40	see.	13.5	1,606	0	
.....	.....	.....	.....	.....	.....	1,500	845.7	11.3	.....	33	4.42	see.	14.2	1,470	0	
.....	.....	.....	.....	.....	.....	1,250	871.5	12.2	.....	33	4.69	see.	15.6	1,225	0	
A. M.																
12.06.....	965.2	7.2	62	see.	7.6	1,175	879.1	12.5	-0.75	32	4.64	see.	16.0	1,152	0	
.....	.....	.....	.....	.....	.....	1,000	897.7	11.2	.....	25	3.32	see.	19.9	980	0	
12:09.....	965.2	7.3	60	see.	7.6	907	907.0	10.5	0.31	22	2.79	see.	22.0	889	0	
.....	.....	.....	.....	.....	.....	750	925.0	11.0	.....	25	3.28	see.	22.0	735	0	
.....	.....	.....	.....	.....	.....	500	953.0	11.8	.....	30	4.15	see.	22.1	490	0	
12:17.....	965.2	7.2	59	see.	7.2	499	954.5	11.8	-4.73	30	4.15	see.	22.1	479	0	
12:30.....	965.2	7.4	57	see.	7.2	396	965.2	7.4	.....	57	5.87	see.	7.2	388	.....	Cloudless.

March 29, 1916, series (No. 5).

A. M.																Cloudless.	
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav. ity.	Electric.		
																	mb.
1:05.....	965.2	5.9	66	...	4.0	396	965.2	5.9	.....	66	6.13	...	4.0	388	.....		
1:06.....	965.2	5.9	66	...	4.5	500	952.9	9.1	.....	62	7.17	...	15.2	490	0		
1:12.....	965.2	5.8	66	...	4.5	558	946.5	10.9	-3.09	59	7.69	...	21.5	547	0		
1:17.....	965.1	5.8	66	...	4.9	750	925.1	10.4	0.25	47	5.93	...	21.3	735	0		
						800	919.3	10.3	.....	44	5.51	...	21.2	784	0		
						1,000	897.7	11.2	.....	38	5.05	...	19.1	980	0		
						1,160	880.3	11.9	-0.44	33	4.60	...	17.5	1,137	0		
						1,250	871.0	11.6	.....	33	4.51	...	17.0	1,225	80		
						1,500	844.8	10.7	.....	33	4.25	...	15.8	1,470	260		
1:35.....	965.1	6.2	63	...	5.8	1,647	820.4	10.2	0.35	33	4.11	...	15.0	1,614	260		
						1,750	819.0	9.5	.....	33	3.92	...	14.5	1,715	350		
						2,000	795.2	7.8	.....	33	3.49	...	13.1	1,960	540		
1:51.....	965.0	6.0	64	...	7.2	2,135	782.7	6.9	0.68	33	3.28	...	12.4	2,092	640		
						2,250	771.5	6.1	.....	33	3.11	...	10.6	2,205	750		
2:50.....	965.0	5.3	64	...	6.7	2,449	753.3	4.7	0.70	33	2.82	...	7.5	2,400	950		
						2,500	848.3	4.5	.....	33	2.78	...	8.3	2,450	960		
						2,750	825.8	3.3	.....	31	2.40	...	12.5	2,694	1,020		
3:08.....	965.0	4.9	66	...	7.2	2,947	808.6	2.4	0.56	30	2.18	...	15.8	2,887	1,040		
						3,000	825.8	3.7	.....	30	2.39	...	15.0	2,694	930		
						3,250	808.7	5.3	.....	29	2.58	...	14.0	2,450	790		
						3,500	795.8	6.9	0.62	29	2.80	...	12.9	2,205	690		
3:40.....	964.9	5.3	62	...	8.0	3,750	779.1	7.4	.....	29	2.99	...	12.6	2,134	660		
						4,000	758.8	8.5	.....	29	3.22	...	12.7	1,960	610		
						4,250	737.4	10.1	.....	29	3.58	...	12.9	1,715	540		
3:50.....	964.9	5.3	61	...	8.0	4,500	716.1	10.6	0.63	29	3.71	...	13.0	1,632	515		
						4,750	694.8	11.6	.....	29	3.96	...	14.1	1,470	530		
						5,000	673.5	13.2	.....	29	4.40	...	15.8	1,225	540		
4:05.....	964.9	5.4	61	...	9.4	5,250	652.2	13.4	0.36	29	4.46	...	16.0	1,199	540		
4:10.....	964.9	5.3	61	...	8.9	5,500	630.9	14.1	-0.04	27	4.34	...	18.5	1,011	450		
						5,750	609.6	14.1	.....	26	4.18	...	18.5	980	430		
4:15.....	964.9	5.4	59	...	8.0	6,000	588.3	14.0	-2.19	16	2.56	...	18.7	782	330		
						6,250	567.0	12.9	.....	21	3.12	...	17.4	735	300		
						6,500	545.7	7.5	.....	50	5.18	...	10.5	490	90		
4:20.....	964.9	5.2	62	...	7.6	6,750	524.4	5.2	.....	62	5.40	...	7.6	388	.....	Cloudless.	

## OBSERVATIONS AT DREXEL, MARCH, 1916.

57

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 29, 1916, series (No. 6).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temper- ature.	Relative humid- ity.	Wind.		Alti- tude.	Pressure.	Temper- ature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.	
A. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
5:12.....	964.8	4.9	64	sse.	8.5	396	964.8	4.9	.....	64	5.54	sse.	8.5	388	.....	Cloudless.
5:13.....	964.8	5.0	65	sse.	8.5	500	953.0	8.7	.....	55	6.19	sse.	16.9	490	150	
5:20.....	964.8	4.8	68	sse.	8.5	626	938.3	13.2	-3.61	45	6.83	sse.	27.0	614	320	
						750	924.8	13.5	.....	36	5.57	sse.	23.8	735	500	
						918	906.2	13.9	-0.24	24	3.81	sse.	19.5	900	430	
						1,000	897.5	13.7	.....	24	3.76	sse.	19.2	950	260	
5:35.....	964.9	4.8	66	sse.	8.0	1,250	870.9	13.1	.....	24	3.62	sse.	18.3	1,225	0	
						1,504	845.5	12.4	0.26	24	3.46	sse.	17.5	1,474	0	
6:52.....	964.9	4.4	68	sse.	8.5	1,750	819.9	11.0	.....	24	3.15	sse.	15.9	1,715	630	
						1,954	801.1	9.9	0.50	24	2.63	s.	14.5	1,915	730	1/10 St.Cu., wsw.
						2,000	796.2	9.5	.....	24	2.85	s.	14.2	1,960	790	
6:08.....	964.8	4.3	69	sse.	7.6	2,250	777.8	7.3	.....	24	2.46	s.	12.6	2,205	1,050	
						2,349	763.3	6.4	0.80	24	2.31	s.	12.0	2,302	1,090	2/10 Cl.St., w.; 1/10 St.Cu., wsw.
6:42.....	964.6	4.7	72	sse.	9.4	2,500	749.5	5.6	.....	24	2.18	sww.	14.3	2,450	1,150	
						2,744	727.1	4.4	0.51	25	2.09	sw.	17.9	2,680	1,200	4/10 Cl.St., w.; 2/10 St.Cu., wsw.
						2,750	726.8	4.4	.....	25	2.09	sw.	17.8	2,694	1,200	
7:31.....	964.3	6.2	74	se.	11.6	3,000	704.8	2.9	.....	28	2.11	wsww.	16.0	2,939	.....	
						3,040	701.0	2.7	0.64	29	2.15	wsww.	15.7	2,978	.....	4/10 Cl.St., w.; 1/10 St.Cu., wsw.
						3,000	704.8	3.0	.....	29	2.20	sw.	15.9	2,939	.....	
8:12.....	964.2	7.4	72	se.	15.6	2,750	726.3	4.8	.....	28	2.41	sww.	17.0	2,694	1,750	
						2,535	745.7	6.3	0.75	28	2.67	s.	18.0	2,484	1,620	
						2,500	748.5	6.6	.....	28	2.73	s.	17.9	2,450	1,600	
						2,250	776.7	8.4	.....	26	2.87	s.	17.3	2,205	1,430	
8:31.....	964.1	8.3	69	se.	15.6	2,000	795.3	10.3	.....	25	3.13	sse.	16.7	1,960	1,280	
						1,920	803.4	10.9	0.63	24	3.13	sse.	16.5	1,882	1,200	
8:45.....	964.0	8.9	66	se.	13.9	1,750	819.9	12.0	.....	24	3.37	sse.	18.0	1,715	1,050	
						1,587	835.8	13.0	-0.26	23	3.45	se.	19.4	1,555	910	
8:51.....	964.0	9.2	65	se.	13.4	1,500	844.5	12.8	.....	21	3.10	se.	23.6	1,470	840	
						1,431	851.6	12.6	0.39	20	2.92	se.	26.9	1,403	780	
						1,250	869.6	13.3	.....	19	2.90	se.	32.2	1,225	620	
9:16.....	963.8	10.0	62	se.	17.0	1,000	895.7	14.3	.....	18	2.93	se.	39.6	980	370	
9:20.....	963.8	10.2	62	se.	13.9	939	902.4	14.5	-4.66	18	2.97	se.	41.4	921	260	
						778	920.1	7.0	1.10	15	1.50	se.	45.1	763	100	
						750	923.2	7.3	.....	18	1.84	se.	42.8	735	60	
9:34.....	963.7	11.2	58	se.	13.4	500	951.5	10.1	.....	46	5.69	se.	22.0	490	0	5/10 Cl., wsw.
						396	963.7	11.2	.....	58	7.71	se.	13.4	288	.....	

March 29, 1916, series (No. 7).

A. M.														
10:37.....	963.3	14.0	46	se.	11.2	396	963.3	14.0	46	7.35	se.	11.2	388	5/10 Cl., wsw.
.....	.....	.....	.....	.....	.....	500	951.1	12.5	47	6.81	se.	13.7	490	.....
10:42.....	963.3	14.3	46	se.	14.8	716	927.0	9.4	49	5.78	se.	19.0	702	0
.....	.....	.....	.....	.....	.....	750	923.1	9.8	47	5.70	se.	19.5	735	0
.....	.....	.....	.....	.....	.....	1,000	896.0	12.9	35	5.21	se.	23.4	980	440
10:49.....	963.3	14.5	47	se.	12.5	1,052	890.4	13.5	32	4.95	se.	24.2	1,031	560
10:57.....	963.3	14.4	47	se.	10.7	1,208	874.2	13.3	23	3.51	sse.	24.0	1,184	680
.....	.....	.....	.....	.....	.....	1,250	869.8	13.1	23	3.47	sse.	23.8	1,225	750
.....	.....	.....	.....	.....	.....	1,500	844.0	12.0	24	3.37	sse.	22.6	1,470	850
.....	.....	.....	.....	.....	.....	1,750	819.4	10.8	25	3.24	sse.	21.4	1,715	1,080
11:10.....	963.2	14.6	47	se.	15.2	1,750	818.4	10.8	25	3.24	sse.	21.3	1,724	1,090
11:15.....	963.2	14.8	47	se.	14.3	1,893	805.4	11.7	24	3.30	sse.	18.5	1,855	1,200
.....	.....	.....	.....	.....	.....	2,000	795.3	11.2	23	3.05	sse.	18.5	1,960	1,200
11:40.....	963.0	16.0	46	se.	14.8	2,225	774.5	10.2	22	2.74	sse.	18.6	2,180	1,200
.....	.....	.....	.....	.....	.....	2,250	772.0	10.0	22	2.70	sse.	18.1	2,205	1,280
.....	.....	.....	.....	.....	.....	2,500	748.5	7.7	21	2.21	sse.	13.6	2,450	1,340
P. M.														
12:12.....	962.6	17.1	40	se.	16.5	2,547	744.3	7.3	21	2.15	sse.	12.8	2,496	1,350
.....	.....	.....	.....	.....	.....	2,500	748.5	7.7	21	2.21	sse.	13.2	2,450	1,270
.....	.....	.....	.....	.....	.....	2,250	770.9	9.9	20	2.44	sse.	15.6	2,205	910
1:02.....	961.8	17.9	40	se.	15.6	2,049	799.9	11.6	19	2.60	sse.	17.5	2,008	705
.....	.....	.....	.....	.....	.....	2,000	794.2	11.8	19	2.63	sse.	17.4	1,960	640
1:14.....	961.8	18.3	40	se.	14.8	1,764	817.2	12.7	18	2.64	sse.	17.3	1,729	310
.....	.....	.....	.....	.....	.....	1,750	818.6	12.5	18	2.61	sse.	17.4	1,715	290
1:16.....	961.8	18.3	40	se.	13.9	1,641	829.2	11.1	18	2.38	sse.	17.8	1,608	140
.....	.....	.....	.....	.....	.....	1,500	843.2	11.9	21	2.93	sse.	19.4	1,470	40
1:32.....	961.7	18.8	39	se.	14.3	1,283	865.6	13.1	25	3.77	sse.	21.5	1,258	260
.....	.....	.....	.....	.....	.....	1,250	868.7	12.7	26	3.82	sse.	20.8	1,225	300
1:41.....	961.7	19.0	39	se.	9.8	1,104	884.2	10.9	32	4.17	sse.	17.8	1,082	320
.....	.....	.....	.....	.....	.....	1,000	895.0	11.8	36	4.98	sse.	16.4	980	220
1:50.....	961.7	19.4	36	se.	11.2	813	915.5	13.3	42	6.41	se.	14.0	797	40
.....	.....	.....	.....	.....	.....	750	922.0	14.2	41	6.64	se.	13.3	735	0
.....	.....	.....	.....	.....	.....	500	949.7	17.9	38	7.79	se.	10.5	490	0
2:02.....	961.7	19.4	37	se.	9.4	396	961.7	19.4	37	8.34	se.	9.4	388	9/10 Cl., wsw.



TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Continued.

March 29, 1916, series (No. 8).

Surface.						At different heights above sea.											Remarks.
Time.	Pressure.	Tem- pera- ture.	Rela- tive humid- ity.	Wind.		Alti- tude.	Pressure.	Tem- pera- ture.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Grav- ity.	Elec- tric.		
P. M.	mb.	° C.	%	se.	m. p. s.	m.	mb.	° C.		%	mb.	se.	m. p. s.	10 <sup>6</sup> ergs.	volts.		
2:35	961.6	19.2	39	se.	13.9	396	961.6	19.2	.....	39	8.68	se.	13.9	388	.....	8/10 Cl., wsw.; 1/10 A. Cu., wsw.	
						500	950.5	17.8	.....	40	8.15	se.	14.6	490	0		
						750	922.1	14.4	.....	44	7.22	se.	16.3	735	0	Solar halo continued.	
2:44	961.6	18.5	42	se.	13.9	777	919.3	14.0	1.39	44	7.03	se.	16.5	762	0		
						1,000	895.3	12.8	.....	44	6.50	se.	18.4	980	200		
2:51	961.6	18.6	42	se.	13.4	1,251	869.0	11.5	0.53	45	6.11	se.	20.5	1,225	380		
						1,500	843.8	13.2	.....	35	5.31	sse.	18.5	1,470	380		
3:03	961.9	19.2	40	se.	12.1	1,563	837.3	13.6	-0.67	33	5.14	sse.	18.0	1,532	380		
						1,750	819.1	13.7	.....	28	4.39	s.	18.1	1,715	450		
3:11	961.8	19.6	39	se.	12.5	1,824	812.0	13.8	-0.08	26	4.10	s.	18.1	1,788	480	8/10 Cl., wsw.; 1/10 A. Cu., wsw.	
						2,000	795.0	11.9	.....	25	3.48	s.	18.1	1,960	550		
3:18	961.9	19.6	39	se.	14.3	2,187	777.6	10.0	1.05	24	2.95	s.	18.0	2,143	615		
						2,250	771.5	9.4	.....	24	2.83	s.	18.1	2,205	650		
						2,500	748.4	7.0	.....	24	2.40	s.	18.6	2,450	780		
						2,750	726.3	4.6	.....	24	2.04	s.	19.2	2,694	910		
3:39	962.2	19.0	41	se.	6.7	2,818	720.4	4.0	0.95	24	1.95	s.	19.3	2,761	.....		
						3,000	704.2	2.6	.....	24	1.77	s.	19.2	2,939	.....		
3:58	962.5	18.9	40	se.	11.2	3,218	685.5	0.9	0.74	24	1.56	s.	19.0	3,153	.....		
						3,000	704.2	2.8	.....	24	1.79	s.	19.8	2,939	930		
						2,750	726.3	5.0	.....	25	2.18	s.	20.7	2,694	850		
4:27	962.3	18.4	43	se.	10.3	2,642	735.5	5.9	0.73	25	2.32	s.	21.1	2,589	810		
						2,500	748.4	6.9	.....	24	2.39	s.	20.1	2,450	600		
						2,250	771.5	8.8	.....	23	2.61	s.	18.4	2,205	250		
4:50	962.2	17.4	47	se.	9.8	2,000	795.0	10.6	.....	22	2.81	sse.	16.8	1,960	0		
						1,797	814.4	12.1	0.14	21	2.97	sse.	15.4	1,761	0		
						1,750	819.1	12.2	.....	21	2.98	sse.	15.7	1,715	0		
						1,500	843.8	12.5	.....	22	3.19	sse.	17.4	1,470	0		
5:01	962.1	17.5	47	se.	8.0	1,370	856.8	12.7	-1.88	22	3.23	sse.	18.3	1,343	0		
						1,250	869.5	10.5	.....	30	3.81	sse.	19.1	1,225	0		
5:03	962.2	17.4	47	se.	8.0	1,242	870.2	10.3	0.61	30	3.76	sse.	19.2	1,218	0	8/10 Cl., wsw.; 1/10 A. Cu., wsw.	
						1,000	895.9	11.8	.....	38	5.26	se.	17.2	980	0		
5:17	962.4	17.3	46	se.	8.9	784	919.3	13.1	1.01	45	6.79	se.	15.5	769	0	Solar halo ended 5:12 p. m.	
						750	923.1	13.4	.....	45	6.92	se.	14.9	735	0		
						500	950.7	16.0	.....	46	8.36	se.	10.4	490	0		
5:21	962.5	17.0	47	se.	8.5	296	962.5	17.0	.....	47	9.11	se.	8.5	388	.....	7/10 Cl., wsw.; 2/10 A. Cu., wsw.	

March 30, 1916 (No. 1).

A. M.																
8:55.....	969.9	4.2	97	nw.	4.0	396	969.9	4.2	.....	97	8.00	nw.	4.0	388	.....	10/10 St., nw.
9:01.....	970.0	4.3	98	nw.	4.5	454	963.1	3.6	1.03	89	7.04	nw.	6.7	445	0	Misting.
						500	957.7	3.9	.....	89	7.19	nw.	6.3	490	0	Altitude of St. base about 500 m.
9:50.....	970.8	5.0	96	nw.	4.0	732	931.5	5.3	-0.64	89	7.93	nw.	4.0	718	0	
						500	958.2	3.7	.....	88	7.00	nw.	8.5	490	0	
9:55.....	970.8	4.9	96	nw.	4.0	494	959.1	3.7	1.12	88	7.00	nw.	8.6	484	0	
9:57.....	970.9	4.8	96	nw.	4.0	396	970.9	4.8	.....	96	8.26	nw.	4.0	388	.....	10/10 St., nw.

March 30, 1916 (No. 2).

P. M.																
1:13	970.8	8.5	76	nw.	5.4	396	970.8	8.5		76	8.44	nw.	5.4	388		10/10 St., nw.
						500	958.2	7.2		78	7.92	wnw.	5.5	490	0	
1:36	970.5	9.7	74	nw.	4.9	570	950.3	6.4	1.58	79	7.59	wnw.	5.6	559	0	
						500	958.2	7.8		77	8.15	wnw.	4.8	490	0	
1:47	970.4	9.8	73	nw.	3.6	396	970.4	9.8		73	8.85	nw.	3.6	388		10/10 St., nw

March 31, 1916 (No. 1).

A. M.																	
8:40	973.2	4.7	86	nw.	3.6	396	973.2	4.7	-----	86	7.34	nw.	3.6	388	-----	5/10 St.Cu., nw.; 5/10 St., nw.	
						500	960.7	3.5	-----	87	6.83	nw.	5.0	490	0		
9:07	973.3	4.8	84	nw.	4.5	644	944.0	1.9	1.17	80	6.19	nw.	6.9	631	0		
						750	931.6	1.1	-----	89	5.88	nw.	7.1	735	150	Altitude of St. base about 750 m.	
9:30	973.3	5.2	82	nw.	6.3	920	912.1	0.0	0.65	88	5.38	nw.	7.5	902	490		
						1,000	902.9	1.8	-----	82	5.71	nw.	8.2	980	490		
9:49	973.3	5.1	84	nw.	5.4	1,020	900.9	2.2	-2.20	80	5.73	nw.	8.4	1,000	490		
						1,250	875.3	-0.2	-----	82	4.93	nw.	7.7	1,225	-----		
10:10	973.2	5.2	82	nw.	5.4	1,300	870.0	-0.7	1.06	83	4.78	nw.	7.5	1,274	-----		
						1,250	875.3	-0.2	-----	83	4.99	nw.	7.3	1,225	-----		
10:26	973.0	5.3	80	nw.	5.4	1,031	897.1	2.0	-1.86	83	5.86	nw.	6.5	1,030	-----		
						1,000	902.9	1.1	-----	83	5.49	nw.	6.8	980	-----		
10:36	972.9	5.5	80	nw.	4.0	938	909.7	-0.1	0.62	84	5.09	nw.	7.1	920	-----	Altitude of St. base about 900 m.	
						750	931.2	1.1	-----	85	5.63	nw.	6.8	735	0		
10:55	972.7	5.9	79	nw.	4.0	585	950.5	2.1	2.06	85	6.04	nw.	6.6	573	0		
						500	960.2	3.9	-----	83	6.71	nw.	5.3	490	0		
11:00	972.6	6.0	80	nw.	3.6	396	972.6	6.0	-----	80	7.48	nw.	3.6	388	-----	5/10 St.Cu., nw.; 5/10 St., nw.	

## OBSERVATIONS AT DREXEL, MARCH, 1916.

59

TABLE 4.—Free-air data from kite flights at Drexel Aerological Station, March, 1916—Concluded.

March 31, 1916 (No. 2).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\Delta t$ 100 m.	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Gravity.	Electric.	
P. M.	mb.	° C.	%		m. p. s.	m.	mb.	° C.		%	mb.		m. p. s.	10 <sup>6</sup> ergs.	volts.	
12:40.....	972.3	6.1	76	nnw.	4.5	396	972.3	6.1	.....	76	7.16	nnw.	4.5	388	.....	10/10 St.Cu., nw.
.....	.....	.....	.....	.....	.....	500	960.0	4.8	.....	79	6.79	nnw.	5.7	490	0	
1:02.....	972.2	6.3	73	nnw.	4.5	652	941.6	2.8	2.04	83	6.20	nw.	7.5	645	0	
.....	.....	.....	.....	.....	.....	750	930.8	2.0	.....	84	5.93	nw.	8.0	735	160	
1:50.....	971.7	6.7	70	nnw.	4.5	1,000	902.0	0.0	.....	85	5.19	nw.	9.5	980	320	
.....	.....	.....	.....	.....	.....	1,012	900.6	-0.1	0.82	85	5.15	nw.	9.6	992	300	Altitude of St.Cu. base about
2:15.....	971.5	7.0	69	nnw.	4.9	1,250	874.1	-1.4	.....	85	4.62	wnw.	.....	1,225	20	1,050 m.
.....	.....	.....	.....	.....	.....	1,482	848.8	-2.6	0.53	85	4.18	wnw.	.....	1,453	0	
.....	.....	.....	.....	.....	.....	1,500	846.8	-2.6	.....	79	3.89	wnw.	.....	1,470	.....	
.....	.....	.....	.....	.....	.....	1,750	820.6	-2.6	.....	72	3.54	wnw.	.....	1,715	.....	
.....	.....	.....	.....	.....	.....	2,000	795.0	-2.6	.....	66	3.25	wnw.	.....	1,960	.....	
2:45.....	971.4	7.2	60	nw.	4.5	2,250	770.7	-2.6	.....	59	2.90	wnw.	.....	2,205	.....	
.....	.....	.....	.....	.....	.....	2,318	764.3	-2.6	0.40	57	2.80	wnw.	.....	2,271	.....	
2:52.....	971.3	7.4	69	nw.	5.4	2,250	770.7	-2.1	.....	55	2.82	wnw.	.....	2,205	.....	
.....	.....	.....	.....	.....	.....	2,030	792.5	-0.3	-0.34	45	2.86	wnw.	.....	1,989	.....	
.....	.....	.....	.....	.....	.....	2,000	795.0	-0.4	.....	50	2.96	wnw.	.....	1,960	.....	
.....	.....	.....	.....	.....	.....	1,750	820.4	-1.2	.....	66	3.65	wnw.	.....	1,715	.....	
.....	.....	.....	.....	.....	.....	1,500	846.3	-2.1	.....	82	4.21	wnw.	.....	1,470	0	
2:59.....	971.3	7.1	68	nnw.	5.8	1,447	852.4	-2.3	0.50	85	4.28	wnw.	9.3	1,418	0	
.....	.....	.....	.....	.....	.....	1,250	873.5	-1.3	.....	85	4.66	wnw.	9.6	1,225	0	
3:08.....	971.2	7.1	67	nw.	4.9	1,029	898.2	-0.2	0.91	85	5.11	nw.	10.1	1,009	0	
.....	.....	.....	.....	.....	.....	1,000	901.1	0.1	.....	84	5.17	nw.	10.0	980	0	
.....	.....	.....	.....	.....	.....	750	929.3	2.4	.....	80	5.81	nw.	0.4	735	0	
3:22.....	970.9	7.0	67	nw.	5.4	668	939.0	3.1	1.36	78	5.95	nw.	0.2	655	0	
.....	.....	.....	.....	.....	.....	500	958.3	5.4	.....	72	6.46	nw.	7.1	490	0	
3:30.....	970.8	6.8	68	nw.	5.8	396	970.8	6.8	.....	68	6.72	nw.	5.8	388	.....	10/10 St.Cu., nw.